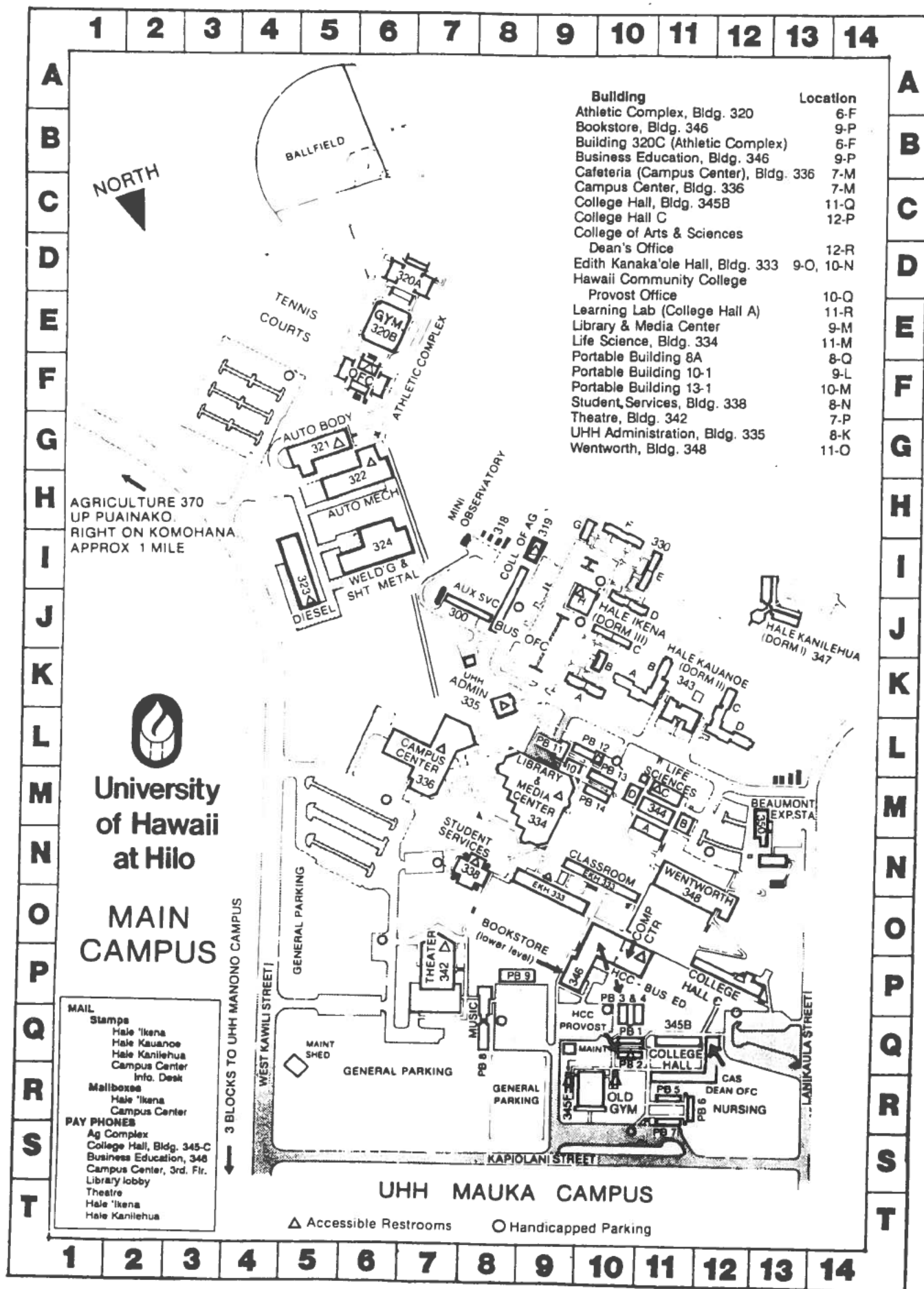


HAWAIIAN EVOLUTION 1991

MEETING PROGRAM





HAWAIIAN EVOLUTION 1991
JOINT MEETING OF
THE AMERICAN SOCIETY OF NATURALISTS
THE SOCIETY OF SYSTEMATIC BIOLOGISTS
THE SOCIETY FOR THE STUDY OF EVOLUTION
AT
THE UNIVERSITY OF HAWAII
HILO, HAWAII

JULY 28 - AUGUST 2, 1991

MEETING ORGANIZER: CHRIS SIMON, University of Connecticut

OPTIMAL FORAGING ON THE UHH CAMPUS

Meals. The Campus Meal Plan provides three meals per day for Monday through Friday, except dinner on Wednesday and Friday. For an additional charge, you can arrange for on-campus dinner on those days, for lunch and dinner on Sunday 28 July, and breakfast (only) on Saturday 3 August, at registration. If you are not on the meal plan, you can purchase tickets for individual meals at registration.

Vending machines and snacks. There's a soda machine in Student Services Bldg. 338, soda and snack machines in Campus Center (near the Information Booth). The UHH Bookstore, lower level of Bldg. 346, sells candy, chips, etc. In campus housing, Hale Ikena has machines for sodas, ice cream, chips, candy, cigarettes. Hale Kehau and Hale Kauanoe have sodas and candy.

Bookstore. The UHH Bookstore is located in Bldg. 346, lower level. Hours will be 8:15 am to 3:30 pm, Monday to Friday (only). Apart from cash, the Bookstore accepts only Traveler's Checks or VISA or MasterCard.

Graduate Student Store. A graduate student booth next to the registration desk in the Campus Center will sell T-shirts and mugs commemorating the meeting. Proceeds will help defray the meeting costs.

SUMMARY SCHEDULE OF EVENTS

SUNDAY, JULY 28

Registration	a.m. 10:00 - 12:30 p.m.	
	3:00 - 6:00 p.m.	Campus Ctr, 2nd floor
Lunch (separate ticket; time to be announced)		Hale Kehau Cafeteria
SSE Council Meeting	4:00 - 6:00 p.m.	Campus Center 313
Opening Reception*	6:00 - 9:00 p.m.	Theater lanai
Recent volcano videos by John I. Kjargaard, Ka 'Io Productions;		
Q & A session led by Tari Moulds, Volcano Observatory	7:30 - 9:00	Theater
* Fee \$8.00; finger food provided; cash bar, wine and beer, \$2. per glass		

MONDAY, JULY 29

Breakfast	6:30 - 8:00 a.m.	Hale Kehau Cafeteria
Registration	7:00 - 10:30 a.m.	
	2:00 - 2:00 p.m.	Campus Ctr, 2nd floor
Hawaii Symposium, part 1	8:00 - 12 noon	Theater
<i>"Ecology, Evolution and Conservation Biology of Endemic Hawaiian Species."</i>		
Lunch	11:00 - 2:00 p.m.	Hale Kehau Cafeteria
SSE Council Mtg. cont.	12:00 - 2:00 p.m.	Hale Kehau Lounge
Hawaii Symposium, part 2	2:00 - 5:30 p.m.	Theater
<i>"Ecology, Evolution and Conservation Biology of Endemic Hawaiian Species" (continued)</i>		
Pupu Dinner and Poster Session (free to all registrants*)		
	6:00 - 9:00 p.m.	Campus Center
*Cash bar, wine and beer, \$2. per glass		

TUESDAY, JULY 30

Breakfast	6:00 - 8:00 a.m.	Hale Kehau Cafeteria
Lunch: Box lunches <i>ONLY</i> ;	pick up at Campus Center Cafeteria	
Registration	7:30 - 9:30 a.m.	Campus Ctr, 2nd floor
Field trips	a.m. 7:00 - 4:30 p.m.	Further information at registration
Dinner	5:00 - 6:30 p.m.	Hale Kehau Cafeteria
Hawaii Symposium, part 3	7:00 - 9:00 p.m.	Theater
<i>"Avian Evolution in Hawaii"</i>		
ASN Young Investigators Symposium	7:00 - 9:00 p.m.	Campus Ctr 306/307

WEDNESDAY, JULY 31

Breakfast	6:00 - 8:00 a.m.	Hale Kehau Cafeteria
Lunch:	Box lunches <i>ONLY</i> ; pick up at Campus Center Cafeteria	
Field Trips	7:00 - 12 noon	Further information at registration
Open discussion with N.S.F. officers	10:00 - 11:30	Campus Center 306-7
SSB Business Meeting	12:00 - 2:00	Campus Center 313
Hawaii Symposium, part 4 "Evolution of Hawaiian Drosophila."	2:00 - 5:00	Theater
SSE Symposia*: "Plant Migrations Across the Pacific"	2:00 - 5:10 p.m.	Campus Ctr 306-7
"Evolution and Speciation of Marine Organisms"		Wentworth 1 (Aud.)
SSE Business Meeting	5:15 - 6:00	Campus Center 313
Dinner (separate ticket; purchase at registration)	5:00 - 6:30 p.m.	Hale Hekau Cafeteria
Banquet and SSE Presidential Address (ticket required)	6:00 - 9:00	Hilo Hawaiian Hotel
(NOTE: Buses to banquet depart from Campus Center parking lot 5:50-5:45 p.m.)		
*the previously-announced SSE symposium on Pacific bird speciation has been postponed to a future meeting.		

THURSDAY, AUGUST 1

Breakfast	6:30 - 8:00 a.m.	Hale Kehau Cafeteria
Contributed papers	8:00 - 12 noon	See schedule
Lunch	11:00 - 1:30 p.m.	Hale Kehau Cafeteria
SSB Council Meeting	12:00 - 2:00	Hale Kehau Lounge
ASN Council Meeting	12:00 - 2:00	Campus Center 313
Contributed papers	1:30 - 3:45	See schedule
ASN Presidential Address	4:00 - 5:30	Theater
Dinner	5:30 - 7:00	Hale Kehau Cafeteria
Contributed papers	7:00 - 9:00	See schedule

FRIDAY, AUGUST 2

Breakfast	6:30 - 8:00 a.m.	Hale Kehau Cafeteria
Contributed papers	8:00 - 12 noon	See schedule
Lunch	11:00 - 2:00 p.m.	Cafeteria
SSB Business Meeting	12:00 - 2:00 p.m.	Hale Kehau Lounge
ASN Business Meeting	12:00 - 2:00 p.m.	Campus Center 313
ASN Symposium:	2:00 - 5:30 p.m.	Theater
<i>"Behavioral Mechanisms in Evolutionary Ecology"</i>		
SSB Symposium	2:00 - 5:30 p.m.	Campus Center 306-7
<i>"Phylogenetic Perspectives on Macroevolutionary Hypotheses"</i>		
Dinner (separate ticket)	5:00 - 6:30	Hale Kehau Cafeteria
Depart by bus for Luau	5:45 p.m.	Campus Center
Luau	6:30 - 9:00 p.m.	KoleKole Park
Return to campus	9:00 p.m.	

(Note: recent lava flows have made the original luau site, on the southeastern coast, inaccessible. Our new site is a scenic park on the rugged east coast 20 minutes north of Hilo, at the mouth of KoleKole Stream.)

SATURDAY, AUGUST 3

Breakfast (separate ticket; time to be announced)	Hale Kehau Cafeteria
Check out of campus housing by noon	

NOTICE TO SPEAKERS AND POSTER PRESENTERS

Speakers: Please check the schedule to find the time and place of your talk; there may have been minor changes. Please note especially that the time allotted to you **includes** the question period, and help our Session Chairs keep the program on schedule. For those who requested video projectors for their contributed papers: final word on availability of these will come Sunday or Monday of the meeting week.

Poster Presenters: In the program below, each poster has been assigned a number, corresponding to a reserved space in the Campus Center. Information on the location of each space in the Campus Center, and further details on set up, will be provided registration. The Poster Session will take place on Monday evening, 6-9 p.m., in conjunction with a buffet dinner.

Poster set-up times, when access to poster rooms and help from the organizers will be available, are as follows:

Sunday	July 28	10 a.m. - 6 p.m.
Monday	July 29	7 a.m. - 8 a.m.
		12 noon - 2 p.m.
		5 p.m. - 6 p.m.

The poster set-up chair is Caitlin O'Connell (University of Hawaii), assisted by Catherine Unabia, Susan McCutcheon and Nora Rojek.

Contributed paper Session Chairs: See reminder at end of program.

SCIENTIFIC PROGRAM (Chronological Order)

MONDAY MORNING

THEATER

HAWAII SYMPOSIUM: ECOLOGY, EVOLUTION & CONSERVATION BIOLOGY OF ENDEMIC HAWAIIAN SPECIES

ORGANIZER: CHRIS SIMON

PART 1 MODERATOR: CHRIS SIMON

- 8:10 SIMON, CHRIS. University of Connecticut. *Introduction.*
8:20 CARSON, HAMPTON. University of Hawaii. *Overview of Hawaiian Evolution.*
8:40 OTTE, DANIEL. Philadelphia Academy of Sciences. *Hawaiian crickets: Four radiation models.*
9:00 HOCH, HANNELORE; MANFRED ASCHE. Marburg University. *Evolutionary aspects of behavioral divergence among populations of the cave-dwelling planthopper *Oliarus polyphemus* from Hawaiian lava tubes.*
9:20 HOWARTH, FRANCIS. Bishop Museum. *The evolutionary ecology of subterranean and aeolian ecosystems in Hawaii.*
9:40 BREAK (Theater Lanai) Coffee, Tea & Pastries
10:30 GILLESPIE, ROSEMARY. University of Hawaii. *Ecological & behavioral diversity in Hawaiian tetragnathid spiders.*
10:50 MILLER, STEPHEN; MICHAEL HADFIELD. University of Hawaii. *Character segregation among new populations of an Hawaiian tree snail.*
11:10 JOKIEL, PAUL. University of Hawaii. *Ecology, biogeography, and evolution of corals in Hawaii.*
11:30 HOURIGAN, THOMAS. U.S.A.I.D. *Mid ocean isolation and the evolution of Hawaiian reef fishes.*
-

MONDAY AFTERNOON

THEATER

HAWAII SYMPOSIUM, PART 2.

MODERATOR: LANI STEMMERMAN

- 2:00 STEMMERMAN, LANI. University of Hawaii at Hilo. *Introduction.*
2:10 SAKAI, ANN University of California at Irvine; WARREN WAGNER Smithsonian Institution. DIANE FERGUSON University of California at Irvine; DERRAL HERBST U. S. Fish and Wildlife Service. *Geographical & ecological correlates of breeding systems of the Hawaiian flora.*
2:30 WELLER, STEPHEN; ANN SAKAI. University of California at Irvine. *The evolution of dicliny in *Schiedea*.*
2:50 MAYER, STEPHANIE. University of Chicago. *The evolution of cryptic dioecy in the Hawaiian shrub *Wikstroemia*.*

- 3:10 CARRI, GERALD University of Hawaii; BRUCE BALDWIN, DONALD KYHOS University of California at Davis. *Origin of the Hawaiian Silversword alliance (Asteraceae).*
- 3:30 GIVNISH, TOM University of Wisconsin. *Molecular evolution in relation to adaptive radiation and geography in Hawaiian lobeliads.*
- 3:50 BREAK (Theater Lanai) Coffee, Tea & Pastries
- 4:10 GANDERS, FRED University of British Columbia. *Adaptive radiation in Hawaiian Bidens.*
- 4:30 O'KANE, STEVE Washington University; KAIUS HELENURM San Diego State University. *Chloroplast and ribosomal DNA variation in the adaptive radiation of Hawaiian Bidens.*
- 4:50 RANKER, TOM. University of Colorado. *Evolutionary genetics of native Hawaiian ferns.*
- 5:10 DIETER MUELLER DOMBOIS. *Ecological problems in the evolution of Metrosideros polymorpha.*

MONDAY EVENING, 6 - 9 P.M.

CAMPUS CENTER

POSTER PRESENTATIONS

Posters will be displayed, grouped approximately by subject matter, in rooms throughout the Campus Center. Synergizing the scientific attraction of the poster session will be dinner, served buffet-style in the Campus Center. Unprecedented response to the call for posters has reduced the requirement for concurrent paper sessions from 8 to 5-6.

Ecology

1. GERBER, ANNE--Washington University. *Genetic variation in Trimerotropis saxatilis (Acrididae).*
2. PECK, ROBERT--University of Hawaii. *Arthropod abundance, habitat structure, and the distribution of insectivorous Hawaiian forest birds.*
3. SEGER, JON--University of Utah. *Multimodal size distributions of bees.*

Conservation biology

4. DUVALL II, FERN--State of Hawaii; CHERYL TARR--University of North Dakota; ROBERT FLEISCHER--Smithsonian Institution. *Genetic variation and inbreeding in the severely endangered Hawaiian crow or "Alala" - a bird at a bottleneck.*
5. POWELL, ELIZABETH--University of Puerto Rico; LANI STEMMERMANN--University of Hawaii. *Population viability analysis of the Mauna Kea silversword, an endangered plant of Hawaii.*
6. THOMSON, JAMES--State University of New York at Stony Brook; E.A. HERRE--Smithsonian Tropical Research Institute; J.L. HAMRICK--University of Georgia; J.L. STONE--State University of New York at Stony Brook. *Allofusioin in strangler figs: implications for conservation.*
7. SNYDER, JIM--Big Island Rainforest Action Group, Hilo, Hawaii. *Protect the rain forest (Malaea I Ka Wai Kole).*

Life history evolution in animals

8. BROWN, WILLIAM--University of Toronto. *Does courtship feeding enhance the fecundity of female black-horned tree crickets? Experimental manipulation of diet and gift size.*
9. HARRIS, REID; LAUREL BERGER--James Madison University. *Communal nesting in the four-toed salamander: competition or cooperation?*
10. HUGHES, KIMBERLEY; MARLASOKOLOWSKI--York University. *Potential selective forces acting on the rover/sitter polymorphism in *Drosophila melanogaster*.*
11. EDMANDS, SUZANNE--University of California at Santa Cruz. *Genetic correlates of various reproductive strategies in brooding sea anemones of the genus *Epiactis*.*
12. MARTINEZ, DANIEL--State University of New York at Stony Brook. *Asexual metazoans undergo senescence.*
13. RODD, HELEN--York University. *The influence of conspecifics on the life history traits of male Trinidadian guppies: interpopulation differences.*
14. ZERA, ANTHONY; SIMON MOLE--University of Nebraska. *Physiological basis of life-history variation in the wing-polymorphic cricket *Gryllus rubens*.*
15. HUGHES, KIMBERLY--University of Chicago. *Simulation studies of a quantitative genetics model of life-history evolution.*
16. TAUBER, CATHERINE; MAURICE TAUBER--Cornell University. *Life-history and color variation in endemic Hawaiian lacewings.*
17. MOUSSEAU, TIMOTHY--University of South Carolina. *Maternal effects underlying life history variation in a California grasshopper.*
18. JONES, ROSS--Memorial University of Newfoundland. *Selection and the evolution of sensory structures in cave and surface populations of *Gammarus minus* (Amphipoda).*
19. HSIAO, TING--Utah State University. *Host plant association and phylogeny of *Leptinotarsa* beetles.*
20. MACKENZIE, AULAY--University of East Anglia. *Host alternation in aphids: adaptation or constraint?*

Plant reproductive biology

21. PENDLETON, ROSEMARY--United States Department of Agriculture. *Reproductive biology of bitterbrush (*Purshia tridentata*): interaccessional hybridization of plants grown in a common garden.*
22. PENDLETON, BURTON--United States Department of Agriculture. *Growth, reproduction and life history features of *Atriplex canescens* grown in a common garden.*
23. RICHTER, KEVIN--University of California at Irvine. *Reproductive tactics of *Yucca whipplei*: the roles of inflorescence size and fruit abortion.*
24. RIGNEY, LISA--State University of New York at Stony Brook. *Nonrandom seed abortion in *Erythronium grandiflorum*: effects of paternity and position.*
25. WOLFE, LORNE--University of California at Santa Barbara. *The timing of expression of inbreeding depression and maternal effects in *Hydrophyllum appendiculatum*, an outcrossing biennial plant.*
26. NEAL, PAUL--State University of New York at Stony Brook. *Resource trade-offs in simultaneously hermaphroditic plants: integrating sex allocation and reproductive effort.*

27. SCHMID, BERNHARD; JACOB WEINER--University of Basel. *Phenotypic and genetic relationships between reproductive and vegetative mass in the perennial plant *Solidago altissima*.*
28. LEVERICH, W.J.--Saint Louis University. *Reproductive biology of *Phlox drummondii*.*

Sexual selection and mating tactics in animals

29. CAMACHO, JUAN PEDRO MARTINEZ; JOSEFA CABRERO HURTADO--Universidad de Granada. *Sperm competition in the grasshopper *Eyprepocnemis plorans*.*
30. HOIKKALA, ANNELI; JOUNI ASPI; JAANA LIIMATAINEN--University of Hawaii. *Sexual selection in natural populations of boreal *Drosophila virilis* group species.*
31. POLAK, MICHAL--University of Toronto. *Hilltop territoriality in the neotropical paper wasp *Polistes canadensis* (Hymenoptera: Vespidae): alternative mating tactics and large size advantage of males.*
32. PRICE, DONALD--University of Tennessee. *Sexual selection and quantitative genetics for sexual dimorphism of zebra finch bill color.*
33. ROWE, LOCKE--University of British Columbia. *Convenience polyandry in a waterstrider.*
34. MAGRATH, M.J.L.; R.A. MULDER--Australian National University. *Variable seasonal plumage dimorphism in superb fairy-wrens, *Malurus cyaneus*.*
35. MULDER, RAOUL--Australian National University. *Extra-pair copulations and display in the superb fairy-wren, *Malurus cyaneus*.*
36. GOWATY, PATRICIA--Clemson University. *Sex ratio conflict and the evolution of provisioning in birds.*

Ecological and quantitative genetics

37. ANDERSON, JOHN--University of Hawaii. *Non-Mendelian segregation in *Drosophila*. Computer simulation of a naturally occurring stable polymorphism.*
38. KAMPING, ALBERT--University of Groningen. *Temperature induced changes in relative fitness of second chromosome arrangements in *Drosophila melanogaster*.*
39. FIELDING, EILEEN--University of Connecticut. *Metabolic rates of coexisting hemiclones of *Poeciliopsis monacha-lucida*: evidence for niche partitioning?*
40. BROOKS, LISA--Brown University. *Fitnesses under frequency-dependent selection.*
41. TURNER, PAUL E.--University of California at Irvine. *Fitness effects due to recombination in bacterial populations.*
42. GERBER, GLENN--University of Tennessee. *Displacement of a native lizard (*Anolis carolinensis*) by a congeneric invader (*A. sagrei*): is size-dependent predation responsible?*
43. PFENNIG, DAVID; HUDSON REEVE--Arizona State University; HUDSON REEVE--Cornell University. *Mean relatedness within nesting aggregations of a solitary wasp.*
44. STRATTON, DON--Princeton University. *The topography of fitness: spatial patterns of selection in a weedy field.*
45. FRY, JAMES--Duke University. *The genetic correlation between a character measured in different environments: estimation and significance testing using ANOVA.*
46. KIBOTA, TRAVIS--University of Oregon. *Threshold selection, mutation load, and the survival of small populations.*

47. PARKER JR., E.D.--University of Arizona. *Fitness effects of transformation in Bacillus subtilis.*

Geographic variation

48. CHIBA, HIDEYUKI--University of Hawaii. *Distribution pattern of the genus Choaspes (Lepidoptera: Hesperidae).*
49. FOX, LAWTON; DOUGLASS HENDERSON; HOLLY WICHMAN--University of Idaho. *Systematic studies of three morphologically similar but geographically diverse Droba (Brassicaceae) species.*
50. KORDOS, LISA--University of Houston. *Genetic differentiation of populations of the blue crab, Callinectes sapidus.*
51. LARSEN, ERIC--Villanova University. *Intraspecific variation in mitochondrial DNA in three closely related backswimmers (Hemiptera: Notonectidae) in Arizona, USA.*
52. SCHMID, JEFFREY; ROBERT SHIPP--University of South Alabama. *Electrophoretic investigation of the ladyfish Elops saurus in the northern Gulf of Mexico and southern Caribbean sea.*
53. BUROKER, NORMAN--University of Washington. *Population genetics of eight variable number of tandem repeat (VNTR) loci among four human racial groups.*
54. WALLIS, GRAHAM; RICHARD ALLIBONE--University of Otago. *Genetic variation among populations of migratory and non-migratory New Zealand Galaxiids.*
55. RIGGS, LAWRENCE--GENREC. *Allozymic diversity within and among populations of three species of oaks in California.*

Hybrid zones, speciation

56. ORR, MATTHEW--University of California at Davis. *A cline in a male genitalic trait in a zone of hybridization between the acridid grasshoppers Melanoplus sanguinipes and Melanoplus devastator.*
57. VIRDEE, SONIA--University of East Anglia. *Population structure in a grasshopper hybrid zone: a view from outer space.*
58. O'CONNELL, CAITLIN University of Hawaii. *Speciation in Hawaiian planthoppers.*
59. SAWAMURA, KYOICHI; TAKAO WATANABE--National Institute of Genetics. *Hybrid lethals and rescue systems among the Drosophila melanogaster complex.*
60. MCMILLAN, W. OWEN--University of Hawaii. *Genetic similarity within two "species complexes" of Indo-west Pacific butterfly fishes (Family Chaetodontidae).*
61. METZ, EDWARD; STEPHEN PALUMBI--University of Hawaii. *Evolution of gamete incompatibility in closely related sea urchins.*
62. KAWATA, MASAKADO--Shizuoka University. *Species are not units that function in evolutionary processes.*

Phylogeny and character evolution

63. KIM, JUNHYONG--State University of New York at Stony Brook. *Character resampling for more accurate phylogenetic estimations.*
64. FAITH, DANIEL--CSIRO. *Randomization tests for monophyly and nonmonophyly.*

65. TAPER, MARK; TED CASE--University of New Mexico. *Modeling character displacement: comparing the ESS, CSC, and quantitative genetic recursion methodologies.*
66. DELLAS, T.; L. MARGARITIS--Athens University, Greece; M.P. KAMBYSELLIS--New York University. *Ultrasculptural diversity in the chorion of Hawaiian Drosophila eggs: ecological and phylogenetic considerations.*
67. STONE, FRED--University of Hawaii. *Chromosomal changes in relation to rapid evolution of Hawaiian crickets in the genus Caconemobius.*
68. HONG, GUANG; HOLLY WICHMAN--University of Idaho. *A molecular correlate of karyotypic megaevolution in Equus.*
69. UNABIA, CATHERINE--University of Hawaii. *Radular structure of Hawaiian Neritacea (Gastropoda: Prosobranchia): evidence of endemic radiation and phylogenetic relations in marine, freshwater and terrestrial species.*

Molecular systematics

70. CROOM, HENRIETTA--University of the South; ROSEMARY GILLESPIE; STEPHEN PALUMBI--University of Hawaii. *Mitochondrial DNA sequences suggest that Hawaiian spiders in the genus Tetragnatha fall into three major clades.*
71. SHAW, KERRY--Washington University. *Mitochondrial DNA evolution and phylogeny in Hawaiian crickets (genus Laupala).*
72. THOMAS, RICHARD--The Natural History Museum; JOHN HUNT--University of Hawaii. *Phylogenetic relationships in the genus Drosophila inferred from Adh DNA sequences.*
73. HERRE, EDWARD; ELDREGE BERMINGHAM--Smithsonian Tropical Research Institute. *Molecular phylogenies of fig pollinating wasps.*
74. APFELBAUM, LILIANA, CRISTIAN ORREGO; JAMES PATTON--University of California at Berkeley. *Evolution of cytochrome b: unusual patterns of differentiation among subspecies of Thomomys talpoides complex (pocket gophers).*
75. ROSEL, PATRICIA--Scripps Institution of Oceanography. *Elucidation of the systematic relationships within the genus Phocoena (Cetacea: Phocoenidae) using mitochondrial DNA sequences.*
76. WILLIAMS, ANNIE--Hofstra University. *Evolution of mitochondrial DNA in megachiropteran and microchiropteran bats.*
77. JOSWIAK, GERARD--Oakland University. *Phylogenetic analysis of allozyme variation in the cyprinid genus Phoxinus.*
78. HAMILTON, MEREDITH; WILLIAM REMBER; KATHERINE OLSSON; DAVID OLIVER; HOLLY WICHMAN--University of Idaho. *The Miocene Clarkia Lake: ancient DNA comes of age.*
79. LEE, RHONDA; RONALD VAN DEN BUSSCHE; HOLLY WICHMAN--University of Idaho. *Phylogenetic analysis of the mammalian retrotransposon mys.*

Molecular evolution

80. VAN DEN BUSSCHE, RONALD; HOLLY WICHMAN--University of Idaho. *Molecular evolution of the mammalian retrotransposon mys.*

81. BAKER, ROBERT J.; DAVID KASS--Texas Tech University. *Chromosomal distribution of LINES in Peromyscus maniculatus.*
82. HUNT, JOHN--University of Hawaii. *Transposable elements in Hawaiian Drosophila evolution.*
83. WELLS, R. SPENCER--Harvard University. *Molecular evolution of the glycerol-3-phosphate dehydrogenase locus.*
84. WANG, DEGUI--University of California at Irvine. *Function and evolution of amd gene of Drosophila.*
85. WISOTZKEY, ROBERT--University of Hawaii. *Distribution of two dispersed middle repetitive elements in the Hawaiian Drosophila. Comparisons of the planitibia, adiostola and mimica sub-groups.*
86. GODDARD, KATHRYN--American University. *Random amplified polymorphic DNA markers in a bisexual and in a unisexual species of fish.*
87. KESSING, BAILEY--University of Hawaii. *Variation in constraints and rates of molecular evolution among mitochondrial DNA protein coding regions.*
88. SULLENDER, BARRY--University of Oregon. *rDNA intergenic spacer variation in Daphnia with special emphasis on mode of reproduction.*
89. HE, MEI--University of Hawaii. *Sequencing analysis and comparison of actin genes from Diptera species.*

TUESDAY EVENING

THEATER

HAWAII SYMPOSIUM, PART 3. AVIAN EVOLUTION IN HAWAII.

MODERATOR: LEONARD FREED

- 7:00 FREED, LEONARD University of Hawaii. *Introduction.*
 - 7:10 FLEISCHER, ROBERT National Zoological Park; CHERYL TARR University of North Dakota. *Evolutionary genetics of Hawaiian birds.*
 - 7:30 CONANT, SHEILA. University of Hawaii. *Geographic variation in the finches and warblers of the NW Hawaiian Islands.*
 - 7:50 SMITH, THOMAS University of California at Berkeley. *Evolutionary consequences of extinctions in a Hawaiian honeycreeper: niche shift and directional selection in the I'iwi.*
 - 8:10 FREED, LEONARD University of Hawaii. *Hawaiian forest bird breeding biology: it's a tough life.*
 - 8:30 CANN, REBECCA University of Hawaii. *Molecular genetics, PCR, and Hawaiian forest bird conservation.*
-

TUESDAY EVENING

CAMPUS CENTER 306-307
ASN YOUNG INVESTIGATORS SYMPOSIUM

ORGANIZER: JOSEPH TRAVIS, Florida State University

- 7:00 BASOLO, ALEXANDRA, University of California at Santa Barbara. *Sex ratio evolution in experimental populations*
7:30 SPITZE, KEN, University of Oregon. *Population biology and life-history evolution in Daphnia*.
8:00 READ, ANDREW, University of Oxford. *Evolutionary ecology of diseases*.
8:30 GIBBS, H. LISLE, McMaster University. *Patterns of natural and sexual selection in bird populations*.
-

WEDNESDAY MORNING 10:00 - 11:30

CAMPUS CENTER 306-307

QUESTION AND ANSWER SESSION, OPEN DISCUSSION ON N.S.F. PROGRAMS

MODERATOR: MARK COURTNEY, National Science Foundation

WEDNESDAY AFTERNOON

THEATER

HAWAII SYMPOSIUM. Part 4. EVOLUTION OF HAWAIIAN *DROSOPHILA*

MODERATOR: KENNETH KANESHIRO

- 2:00 KANESHIRO, KENNETH University of Hawaii. *Introduction*.
2:10 KANESHIRO, KENNETH University of Hawaii. *Adaptive evolution versus sexual selection in Hawaiian Drosophila*.
2:40 HOIKALA, ANNA University of Oulu. *Lovesongs of the Hawaiian Drosophila*.
3:10 DESALLE, ROB American Museum of Natural History. *Molecules and morphology and the origin of Hawaiian Drosophila*.
3:40 BREAK (Library Lanai) Coffee, Tea & Pastries
4:00 HUNT, JOHN. University of Hawaii. *Phylogeny of the ADH gene in Hawaiian Drosophila*.
4:30 KAMBYSELLIS, MICHAEL New York University; ELYSSE M. CRADDOCK (Speaker) State University of New York at Purchase. *Evolutionary divergence in Drosophila yolk proteins: A search for ancestors to the Hawaiian species via sequence analysis of vitellogenin genes*.
-

WEDNESDAY AFTERNOON

CAMPUS CENTER 306-307

SSE SYMPOSIUM: PLANT MIGRATIONS ACROSS THE PACIFIC

ORGANIZER: ICHIRO FUKUDA

- 2:00 FUKUDA, ICHIRO Tokyo Woman's Christian University. *Introduction.*
2:10 WAGNER, WARREN Smithsonian Institution. *Phytogeographical patterns in Hawaiian angiosperms.*
2:40 WAGNER, WARREN H. JR. University Michigan. *How different are phytogeographical patterns between Hawaiian pteridophytes and angiosperms?*
3:10 BALDWIN, BRUCE University of Arizona; DONALD KYOS, JAN DVORAK University of California at Davis; GERALD CARR University of Hawaii. *Molecular insights on the origin and adaptive radiation of the Hawaiian silversword alliance.*
3:40 BREAK (Library Lanai) Coffee, Tea & Pastries
4:10 ITO, MOTOMI, MIKIO ONO Tokyo Metropolitan University. *The origin and evolution of flora in the Bonin (Ogasawara) islands.*
4:35 FUKUDA, ICHIRO Tokyo Woman's Christian University. *The origin and migration of Trillium species across the Pacific.*
-

WEDNESDAY AFTERNOON

WENTWORTH 1, PHYSICS AUDITORIUM

SSE SYMPOSIUM: EVOLUTION AND SPECIATION OF MARINE ORGANISMS

ORGANIZERS: DONALD POTTS AND STEPHEN PALUMBI

- 2:00 POTTS, DONALD University of California at Santa Cruz. *Introduction.*
2:10 PALUMBI, STEPHEN University of Hawaii. *Marine speciation on a small planet.*
2:40 BERMINGHAM, ELDREDGE; SHAWN MCCAFFERTY; MYRA SCHULMAN Smithsonian Tropical Research Institute. *Historical biogeography of tropical marine fishes; a molecular approach.*
3:10 LESSIOS, HARILAOS Smithsonian Tropical Research Institute. *What can the Isthmus of Panama tell us about speciation?*
3:40 BREAK (Library Lanai) Coffee, Tea & Pastries
4:10 POTTS, DONALD; RONALD GARTHWAITE University of California at Santa Cruz; ANN BUBB University of Iowa. *Biological and geological approaches to speciation in corals.*
4:40 VERMEIJ, GEERAT. University of California at Davis. *Speciation in the past: A perspective from regional comparisons.*
-

WEDNESDAY EVENING

HILO HAWAIIAN HOTEL

6:00 - 8:00 P.M.: THAI BANQUET

8:00 P.M.: SSE PRESIDENTIAL ADDRESS

DR. JANIS ANTONOVICS, Duke University

"Straw hats, rainbows, and punting down the river: exploring the evolution-ecology interface."

SUMMARY SCHEDULE OF CONTRIBUTED PAPER SESSIONS

	Campus Ctr 301	EKH 123	Campus Ctr 306-307	Theater	Wentworth 9	Wentworth 1
Th a.m. I 8-10	Life History Evolution	Population and Community Ecology	Plant Mating systems	Population Structure	Hybrid zones and Speciation	Phylogenetic Methods
Th a.m. II 10- 12	Life History Evolution	Growth, Development and Evolution	Plant Mating Systems	Population structure and Geographic Variation	Speciation	Molecular Phylo- genetics
Th aft. 1:30 -4	Life History Evolution	Quantitative and Ecological Genetics	Plant Mating Systems	Plant Population Structure	Speciation	Molecular Phylo- genetics
Th. eve. 7-9	Quantitative and Ecological Genetics		Sex Ratios and Evolution of Sex	Plant Population Structure	Behavior and Evolution	Molecular Phylo- genetics
Fri a.m. I 8-10	Quantitative and Ecological Genetics		Sexual Selection in Animals	Plant Population Structure; Population Biology of Endangered Species	Molecular Evolution	Phylogeny of Character Complexes
Fri. a.m. II	Quantitative and Ecological Genetics		Sexual Selection in Animals	Population Biology of Endangered Species	Molecular Evolution	Phylogeny of Character Complexes

Note on program design: Similar topics were grouped in an attempt to form coherent sequences of sessions. Subject to scheduling constraints, every attempt was made to place speakers in their first-choice sessions. Categories are inevitably coarse and overlapping; read the whole program to find all papers on a given subject. Room size assignments are based on fraction of submitted papers devoted to each topic, with related topics placed in nearby rooms. Suggestions/complaints should be directed to SSE secretary.

Contributed papers 1: LIFE HISTORY EVOLUTION

CHAIR: HENRY FUKUI

- 8:15 STEARNS, STEVEN--Zoology Institute, Basel. *Molecular and evolutionary approaches to ageing.*
- 8:30 WOODRUFF, R.C.--Bowling Green State University. *Longevity is reduced by P DNA transpositions in somatic cells of Drosophila melanogaster.*
- 8:45 ROPER, CAROLINE--Edinburgh University. *The genetics of ageing in male Drosophila.*
- 9:00 FUKUI, H. HENRY--University of Minnesota. *Full-diallel analysis on four inbred lines of Drosophila melanogaster male longevity.*
- 9:15 ROGERS, ALAN--University of Utah. *Evolution of age-specific discount rates.*
- 9:30 GAUGER, VANESSA--University of Hawaii. *Successive clutches in the black noddy, Anous minutus.*
- 9:45 ROTENBERRY, JOHN; KATHRYN ROBINSON--University of California at Riverside. *Clutch size determination and cost of reproduction in house wrens.*
- 10: BREAK

THURSDAY MORNING I

EKH 123

Contributed papers 2: POPULATION AND COMMUNITY ECOLOGY

CHAIR: SHIRLEY BARTIDO

- 8:15 BROWN, JAMES; MARK TAPER; EDWARD HESKE--University of New Mexico. *Constant competition in a variable environment: experiments with desert rodents.*
- 8:30 GROSHOLZ, EDWIN--Friday Harbor Laboratories. *Apparent competition due to a viral pathogen in terrestrial isopods.*
- 8:45 ABRAMS, PETER--University of Minnesota. *Indirect interactions caused by adaptive foraging.*
- 9:00 JOHNSON, MICHAEL--University of Western Australia. *Adaptive radiation and community structure in Partula snails on Moorea.*
- 9:15 BARTIDO, SHIRLEY; M.P. KAMBYSELLIS--New York University. *Association of microorganisms with endemic Drosophila and implications for Hawaiian ecosystems.*
- 9:30 KIDO, MICHAEL--University of Hawaii. *Food and feeding habits of the endemic Hawaiian freshwater goby, Awaous stamineus (Pisces: Gobiidae).*
- 9:45 INGOLFSSON, AGNAR--University of Iceland. *The origin of the rocky shore fauna of Iceland and the Canadian Maritimes.*
- 10:00 RUSSELL, MICHAEL--California Academy of Sciences. *Paleobiogeography, dispersal, and larval ecology of Eastern Pacific gastropods.*
- 10:15 BREAK

THURSDAY MORNING I

Campus Center 306/307

Contributed papers 3: PLANT MATING SYSTEMS

CHAIR: JOHN BISHOP

- 8:00 BAKER, HERBERT--University of California at Berkeley. *De-domestication: the saga of the cabbage (Brassica oleracea).*
- 8:15 BISHOP, JOHN--University of Washington. *Selection on flowering phenology in colonizing populations of Lupinus lepidus at Mount St. Helens.*
- 8:30 MCKONE, MARK; DONALD CAMPANELLA; DAVID HAMILTON; CHRISTOPHER LUND; HOLLY PEARSON--Carleton College. *Are grass pistils optimal structures for pollen tube competition?*
- 8:45 LOVELESS, LYN--College of Wooster. *Plant size and fruiting success in a hummingbird-pollinated tree, Erythrina costaricensis.*
- 9:00 SHAW, JONATHAN--Ithaca College. *Sex ratios, sex dimorphism, and population structure in the haploid moss Ceratodon purpureus.*
- 9:15 HOFMAN, ANNELIES--University of Groningen. *Reproductive strategies and population structure in the moss Plagiothecium undulatum.*
- 9:30 LLOYD, DAVID--University of Canterbury. *Estimation of strong selective forces in heterostylous flowers.*
- 9:45 GALLOWAY, LAURA--University of California at Davis. *Plasticity of reproductive allocation among populations of Mimulus guttatus.*
- 10:00 BREAK

THURSDAY MORNING I

Theater

Contributed papers 4: POPULATION STRUCTURE

CHAIR: MARK DYBDAHL

- 8:00 ORIVE, MARIA--University of California at Berkeley. *A coalescent approach to effective population size in organisms with complex life histories.*
- 8:15 NUNNEY, LEN--University of California at Riverside. *Effective population size: some simple formulae describing complex situations.*
- 8:30 COFFROTH, MARY-ALICE--State University of New York at Buffalo. *DNA fingerprinting of a gorgonian coral: identification of clonal structure in a species with vegetative propagation.*
- 8:45 BROOKES, MARTIN--University of Wales, College of Cardiff. *Fine scale population structure in the small ermine moth, Yponomeuta padellus.*
- 9:00 KORMAN, AMY--Mississippi State University. *Gene flow and the population structure of the tobacco budworm (Heliothis virescens).*
- 9:15 WIENER, PAM--Stanford University. *The effects of the mating system on the evolution of migration in a spatially-heterogeneous population.*
- 9:30 DYBDAHL, MARK--Indiana University. *Extinction/recolonization promotes gene flow in a metapopulation system: evidence from a tidepool copepod.*
- 9:45 LOCKWOOD, SAMUEL--University of New Hampshire. *Population structure of chinook salmon (Oncorhynchus tshawytscho) from the American northwest estimated with mitochondrial DNA sequences.*
- 10:00 BREAK

THURSDAY MORNING I

Wentworth 9

Contributed papers 5: HYBRID ZONES AND SPECIATION

CHAIR: KENT REED

- 8:00 SCHIBECI, SUE--University of Wollongong. *The ecological genetics of Banksia robur and Banksia oblongifolia and their hybrid zone.*
- 8:15 BERT, THERESA; KEVIN MCCARTHY; HECTOR CRUZ-LOPEZ--Florida Marine Research Institute; STEVEN BOGDANOWICZ; RICHARD HARRISON--Cornell University. *Classifying stone crabs (genus Menippe) from hybrid zones: the relative phylogenetic resolving power of coloration, morphometrics, allozymes, and mtDNA restriction fragment patterns.*
- 8:30 VIRDEE, SONIA--University of East Anglia. *The role of dispersal and environmental selection in the maintenance of a Pyrenean hybrid zone in the grasshopper Chorthippus parallelus.*
- 8:45 BERT, THERESA; DON HESSLEMAN; WILLIAM ARNOLD; HECTOR CRUZ-LOPEZ; DAN MARELLI--Florida Marine Research Institute; WILLIAM MOORE--Wayne State University. *Hybrid hard clams (genus Mercenaria) are preferentially infected with gonadal neoplasms.*
- 9:00 LITTLEJOHN, MURRAY--University of Melbourne; GUNTER GOLLMAN--University of Vienna. *Zonal hybridization in the Geocrinia laevis complex (Anura: Leptodactylidae): advertisement calls and allozymes.*
- 9:15 REED, KENT--University of Rochester. *Cytogenetic analysis of two hybridizing cytotypes of the Sceloporus grammicus complex (Phrynosomatidae).*
- 9:30 WAKE, DAVID; CHRISTOPHER SCHNEIDER; TODD JACKMAN; CRAIG MORITZ--University of California at Berkeley. *Genetic confirmation that the Ensatina eschscholtzii complex is a "ring-species."*
- 9:45 GOODNIGHT, CHARLES--University of Vermont. *Epistasis and the formation of gene complexes: a genetic model of speciation.*
- 10:00 BREAK

THURSDAY MORNING I

Wentworth 1

Contributed papers 6: PHYLOGENETIC METHODS

CHAIR: JAMES ARCHIE

- 8:00 ARCHIE, JAMES--California State University at Long Beach. *Relevant properties of the Homoplasy Excess Ratio: minimum value and relationship to number of taxa.*
- 8:15 PENNY, DAVID; MICHAEL HENDY; PETER WADDELL--Massey University. *Extensions to the Hadamard transform method for evolutionary trees.*
- 8:30 HILLIS, DAVID; JAMES BULL; IAN MOLINEUX--University of Texas. *Generation of known phylogenies from T7 phage: tests of methods for phylogenetic inference.*
- 8:45 HUELSENBECK, JOHN--University of Texas. *Tree-length distribution skewness: an indicator of phylogenetic information.*
- 9:00 RODRIGO, ALLEN--University of Auckland. *Calibrating the bootstrap test of monophyly.*
- 9:15 WARHEIT, KENNETH--Smithsonian Institution. *A tree-thinking and statistical approach to fossil species: a test of assumptions.*

- 9:30 CUNNINGHAM, CLIFF--University of Texas. *Using statistics to test hypotheses of heterochrony in molecular phylogenies.*
- 9:45 WAKELEY, JOHN--University of California at Berkeley. *Tree-based testing for variation in substitution rates across nucleotide sites in DNA sequences.*
- 10:00 JARECKI, LIANNA--University of Florida. *A comparison of phylogenetic information from different ribosomal RNA regions: significance of differential sequence evolution to phylogenetic data analysis.*
- 10:15 BREAK

THURSDAY MORNING II

Campus Center 301

Contributed papers 7: LIFE HISTORY EVOLUTION (continued)

CHAIR: SARAH COHEN

- 10:15 SINERVO, BARRY--University of California at Berkeley; PAUL LICHT; RAY HUEY--University of Washington; PAUL DOUGHTY. *Adaptation and constraint in lizard reproduction: an experimental test of natural selection on offspring size.*
- 10:30 BAKER, JOHN--University of Arkansas. *Evolutionary diversification of female life history in threespine stickleback.*
- 10:45 COHEN, SARAH--University of Washington. *Evidence for a mixed mating system in a sessile marine invertebrate.*
- 11:00 PFENNIG, DAVID; JAMES COLLINS; MICHAEL LOEB--Arizona State University. *Disease as a factor limiting the spread of cannibalism in tiger salamanders.*
- 11:15 REZNICK, DAVID--University of California at Riverside. *Life history evolution in guppies: mortality rates in natural populations.*
- 11:30 EHLINGER, TIMOTHY--University of Wisconsin at Milwaukee. *Phenotypic variation in sunfish: the relative importance of reproductive and trophic function.*
- 11:45 ROFF, DEREK--McGill University. *The evolution of flightlessness on islands: myth or reality?*

THURSDAY MORNING II

EKH 123

Contributed papers 8: GROWTH, DEVELOPMENT, AND EVOLUTION

CHAIR: ADAM CHIPPINDALE

- 10:30 PODOLSKY, ROBERT--University of Washington. *Predicting allometry: physiological stress and ontogenetic shape change in the barnacle *Semibalanus cariosus*.*
- 10:45 FAIRBAIRN, DAPHNE--Concordia University. *The origins of allometry: size and shape polymorphism in a waterstrider (*Gerris remigis* Say).*
- 11:00 THOMPSON, DANIEL--University of Nevada at Las Vegas. *Evolution and ontogenetic shifts in diet-induced phenotype plasticity in grasshoppers.*
- 11:15 CHIPPINDALE, ADAM--University of California at Irvine. *The developmental stability of individuals: size-scaling of fluctuating asymmetries through growth trajectories.*
- 11:30 NOVAK, JAMES--Savannah River Ecology Laboratory. *Morphological asymmetry in *Sigmodon*: Truss and fractal analysis of sex, age, and heterozygosity classes.*
- 11:45 RICH, PAUL--Stanford University; N. MICHELE HOLBROOK; NINA LUTTINGER--University of Kansas. *Leaf development and crown geometry of two iriarteoid palms.*

THURSDAY MORNING II

Campus Center 306/307

Contributed papers 9: PLANT MATING SYSTEMS (Continued)

CHAIR: Lorne Wolf

- 10:15 ASHMAN, TIA-LYNN--University of California at Davis. *Using resource manipulations to investigate canalization and plasticity of sex allocation patterns in plants.*
- 10:30 DELPH, LYNDIA--Indiana University; THOMAS MEAGHER--Rutgers University. *Resource allocation patterns in dioecious *Silene latifolia*: responses to altered sink:source relations.*
- 10:45 MAZER, SUSAN--University of California at Santa Barbara. *Phenotypic plasticity of phenotypic gender, polleniovule ratios, and floral traits in wild radish.*
- 11:00 SCHICK, CHARLES--University of California at Santa Barbara. *Factors maintaining geographic variation in flower size in *Nemophila menziesii*.*
- 11:15 UYENOYAMA, MARCY--Duke University. *Origin of incompatibility systems.*
- 11:30 DOLE, JEFFEREY--University of California at Davis. *Inbreeding depression in two *Mimulus* taxa measured by multigenerational changes in the inbreeding coefficient.*
- 11:45 KAROLY, KEITH--University of Chicago. *Inbreeding depression in the genus *Lupinus*: a comparison of three related taxa.*

THURSDAY MORNING II

Theater

Contributed papers 10: POPULATION STRUCTURE (Continued)

CHAIR: MICHAEL HELLBERG

- 10:15 SLATKIN, MONTGOMERY--University of California at Berkeley. *Detecting isolation by distance from allozyme data.*
- 10:30 HELLBERG, MICHAEL--University of California at Davis. *Limited larval dispersal and broad geographic range: patterns of gene flow in the paradoxical cup coral *Balanophyllia elegans*.*
- 10:45 HUNT, ALISON--University of Wollongong. *The consequence of broadcast spawning versus philopatry for the genetic structure of Australian starfish.*
- 11:00 TARR, CHERYL--University of North Dakota; ROBERT FLEISCHER--Smithsonian Institution. *Mitochondrial DNA variation in the Amakihi.*
- 11:15 ROWE, ERIC--University of California at Berkeley. *Maximum likelihood estimation of genealogical divergence time.*
- 11:30 NEIGEL, JOSEPH--University of Southwestern Louisiana. *Alternative interpretations of mitochondrial lineage distributions: the need for comparison with nuclear gene lineages of recent origin.*
- 11:45 CHLAN, CARYL--University of Southwestern Louisiana. *Strategies for the identification of nuclear gene lineages of recent origin in stone crabs (*Menippe*).*

THURSDAY MORNING II

Wentworth 9

Contributed papers 11: SPECIATION (Continued)

CHAIR: SUSAN FOSTER

- 10:15 ORR, H. ALLEN--University of California at Davis. *A genetic model of speciation: the basis of male sterility among Drosophila pseudoobscura hybrids.*
- 10:30 BENEDIX, JR., J.H.--Kansas State University. *The roles of sexual selection and natural selection in the evolution of premating reproductive isolation in animals.*
- 10:45 PTACEK, MARGARET--University of Missouri. *Evolutionary dynamics of speciation by polyploidy in gray treefrogs.*
- 11:00 FOSTER, SUSAN--University of Arkansas. *The consequences of behavioral diversification for speciation in the stickleback (Gasterosteidae).*
- 11:15 SCHLUTER, DOLPH--University of British Columbia. *Ecological character displacement and speciation in sticklebacks.*
- 11:30 SAVALLI, UDO--University of California at Berkeley. *The role of species recognition and sexual selection in the evolution of tail length in widowbirds (Euplectes; Ploceidae).*
- 11:45 WEINBERG, JAMES--Woods Hole Oceanographic Institution. *Chromosomal divergence and premating isolation in a marine polychaete from New England, California and Hawaii.*

THURSDAY MORNING II

Wentworth 1

Contributed papers 12: MOLECULAR SYSTEMATICS

CHAIR: JUDITH RHYMER

- 10:30 ADKINS, RONALD; RODNEY HONEYCUTT--Texas A&M University. *Mammalian systematics and rates of evolution of the mitochondrial gene cytochrome oxidase subunit II.*
- 10:45 ALLARD, MARC; MICHAEL MIYAMOTO--University of Florida. *Molecular systematics of the Bovidae: can the evidence of 40,000 bp be wrong?*
- 11:00 JANECEK, LAURA; RODNEY HONEYCUTT--Texas A&M University. *Molecular systematics of the Bovidae: evidence from mtDNA sequence data.*
- 11:15 HELM-BYCHOWSKI, KATHLEEN; JOEL CRACRAFT--University of Illinois at Chicago. *An analysis of phylogenetic reconstruction using the mtDNA cytochrome b gene.*
- 11:30 ELLSWORTH, DARRELL--Texas A&M University. *Molecular systematics and evolution of North American grouse inferred from mitochondrial DNA nucleotide sequence.*
- 11:45 RHYMER, JUDITH; MICHAEL BRAUN--Smithsonian Institution. *Evolutionary relationships in the Hawaiian mallard complex of waterfowl.*

THURSDAY AFTERNOON

Campus Center 301

Contributed papers 13: LIFE HISTORY EVOLUTION (continued)

CHAIR: MARILYN HOUCK

- 1:30 SRYGLEY, ROBERT--University of Texas. *Phylogenetic constraints and selective pathways: an evaluation of neotropical butterfly flight morphology.*
- 1:45 CHABORA, PETER--City University of New York. *Male parasitoids: an analysis of life history variation.*
- 2:00 LAFFERTY, KEVIN--University of California at Santa Barbara. *Variation of life history strategy in relation to the risk of parasitic castration in the marsh snail, Cerithidea californica: evidence for natural selection.*
- 2:15 HOUCK, MARILYN--University of Arizona. *Phoresy: the evolution of parasitism and potential for speciation in Astigmatid mites.*
- 2:30 HERRE, EDWARD--Smithsonian Tropical Research Institute. *Host population structure and the evolution of virulence in nematode parasites of fig pollinating wasps.*
- 2:45 BOWERS, DEANE--University of Colorado. *Sequestration of plant chemicals and the evolution of unpalatability in Lepidoptera.*
- 3:00 CARROLL, SCOTT; STEVEN KLASSEN--University of California at Davis. *Recent host shifts and evolution of performance and beak length in the soapberry bug.*
- 3:15 SANDOVAL, CRISTINA--University of California at Santa Barbara. *Patterns of, and factors affecting host plant utilization by morphs of the walking stick, Timema sp.*
- 3:30 PALMER, JAMES; M.A. RANKIN, J.R. COTE--Texas A&M University. *Blood proteins that predict overwinter survival in the boll weevil.*

THURSDAY AFTERNOON

EKH 123

Contributed papers 14: QUANTITATIVE AND ECOLOGICAL GENETICS

CHAIR: ELIZABETH LACEY

- 2:00 KIRKPATRICK, MARK; RICHARD GOMULKIEWICZ--University of Texas. *The quantitative genetics of reaction norms and phenotypic plasticity.*
- 2:15 VIA, SARA--Cornell University. *Recombination between specialist aphid genotypes generates genetic variation in reaction norms.*
- 2:30 SCHMID, BERNHARD; CLAUDINE DOLT--University of Basel. *Separation of effects of maternal and paternal environment and genotype on offspring phenotype in the perennial plant Solidago altissima.*
- 2:45 SCHMITT, JOHANNA; JENNIFER NILES; RENATA WULFF--Brown University. *Norms of reaction of seed traits to maternal environments in Plantago lanceolata.*
- 3:00 LACEY, ELIZABETH--University of North Carolina at Greensboro. *Effect of parental temperature on expression of offspring life history traits in Plantago lanceolata.*
- 3:15 KOHANE, MICHAEL--Stanford University. *Modified energy availability and larval development: in vivo & in vitro analysis of the effects of supplemented NAD & glucose upon larval to adult development time in isofemale strains of Drosophila melanogaster.*

THURSDAY AFTERNOON

Campus Center 306/307

Contributed papers 15: PLANT MATING SYSTEMS (Continued)

CHAIR: CLAIRE MCCALL

- 1:45 KARRON, JEFFREY--University of Wisconsin; DIANE MARSHALL--University of New Mexico. *Effects of environmental variation on fitness of singly and multiply sired progenies in wild radish.*
- 2:00 WALLER, DON--University of Wisconsin. *Inbreeding depression among populations of *Impatiens capensis*.*
- 2:15 HOLSINGER, KENT--University of Connecticut. *Mating system evolution in *Senecio vulgaris*: the role of pollen discounting?*
- 2:30 MEAGHER, THOMAS; DENISE COSTICH--Rutgers University. *Sexual dimorphism in nuclear DNA content within and between populations of *Silene latifolia*.*
- 2:45 MCCALL, CLAIRE--Trinity University. *Two populations of jewelweed (*Impatiens capensis*) respond differently to two levels of inbreeding.*
- 3:00 SUN, MEI--University of California at Davis. *Genetic consequences of gynodioecy in Hawaiian *Bidens*.*

THURSDAY AFTERNOON

Theater

Contributed papers 16: POPULATION STRUCTURE (Continued)

CHAIR: MICHAEL ROBERTS

- 1:30 ROBERTS, MICHAEL--Wesleyan University. *Gene flow and genetic exchange among natural isolates of *Bacillus subtilis*.*
- 1:45 CREASE, TERESA--University of Windsor. *Ribosomal DNA variation in sexual and asexual *Daphnia pulex*.*
- 2:00 WYNGAARD, GRACE--James Madison University. *Unusual numbers of ribosomal DNA genes in populations of copepods (Arthropoda: Crustacea).*
- 2:15 KARL, STEPHEN; BRIAN BOWEN; JOHN AVISE--University of Georgia. *Global population structure and male-mediated gene flow in the green turtle: RFLP analyses of anonymous nuclear regions.*
- 2:30 CHIPPINDALE, PAUL; DAVID HILLIS--University of Texas. *Molecular differentiation in morphologically variable neotenic cave and spring salamanders of central Texas.*
- 2:45 LESSA, ENRIQUE--University of California at Berkeley. *Sequence variation of introns in populations of pocket gophers (*Thomomys bottae*).*
- 3:00 LUM, J. KOJI--University of Hawaii. *Human migration into Polynesia: a mitochondrial perspective.*
- 3:15 RIDDLE, BRETT--University of Nevada at Las Vegas. *Is there spatial and temporal synchrony in the history of *Perognathus* (pocket mice) and *Onychomys* (grasshopper mice) speciation?: a preliminary assessment.*
- 3:30 BURTON, RONALD--University of Houston. *Biochemical and molecular mechanisms underlying "outbreeding depression" in physiological performance.*

THURSDAY AFTERNOON

Wentworth 9

Contributed papers 17: SPECIATION (Continued)

CHAIR: LAURIE TOMPKINS

- 1:45 WELLS, MARTA--University of Connecticut. *Reproductive isolation among populations of green lacewings of the genus Chrysoperla: behavioral and genetic evidence.*
- 2:00 BUTLIN, ROGER--University of Wales, College of Cardiff. *Components of variability in the mating signals and responses of brown planthopper.*
- 2:15 ZOUROS, ELEFThERIOS--Dalhousie University. *Polymorphism for a gene affecting male hybrid fertility in the species pair Drosophila mojavensis/D. arizonae.*
- 2:30 KOEPFER, H. ROBERTA--Queens College. *Period mutations affect mate choice in Drosophila melanogaster.*
- 2:45 TOMPKINS, LAURIE--Temple University. *Chemical communication in Hawaiian Drosophila.*
- 3:00 MACKENZIE, AULAY--University of East Anglia. *A trade-off for host utilization in an aphid.*
- 3:15 FUNK, VICKI; WARREN WAGNER--Smithsonian Institution. *Patterns of speciation in some endemic Hawaiian angiosperms.*
- 3:30 COHAN, FREDERICK--Wesleyan University. *Genetic exchange does not impede adaptive divergence between Bacillus subtilis populations adapted to different habitats.*

THURSDAY AFTERNOON

Wentworth 1

Contributed papers 18: MOLECULAR SYSTEMATICS

CHAIR: ANDREW MARTIN

- 1:30 JACKMAN, TODD--University of California at Berkeley. *Phylogenetic relationships within the salamander genus Aneides based on new molecular and morphological data.*
- 1:45 MEYER, AXEL--State University of New York at Stony Brook. *Evolutionary relationships within and among the species flocks of East African cichlid fishes based on mtDNA sequences.*
- 2:00 AREVALO, ELISABETH; JACK SITES--Brigham Young University; SCOTT DAVIS--Texas A&M University. *Sequence divergence of mitochondrial DNA in the Sceloporus grammicus complex in central Mexico.*
- 2:15 JARRELL, PAUL--University of Oregon. *On the rate of mtDNA evolution in animals: reliability of molecular clocks.*
- 2:30 MARTIN, ANDREW--University of Hawaii. *A physiological molecular clock for mitochondrial DNA: evidence from sharks & mammals.*
- 2:45 COLLINS, TIMOTHY; HARIS LASSIOS; ELDREDGE BERMINGHAM--University of Michigan. *Taxon-specific rates of molecular evolution in Amphi-American species pairs.*
- 3:00 BRIDGE, DIANE--Yale University. *A basal position for Anthozoa among cnidarian classes is supported by mtDNA structure.*
- 3:15 SMITH, MICHAEL--Simon Fraser University. *Phylogeny of echinoderm classes inferred from mitochondrial gene rearrangements.*
- 3:30 HOFFMANN, RICHARD--Iowa State University; JEFFREY BOORE; WESLEY BROWN--University of Michigan. *A novel mitochondrial genome organization for the blue mussel, Mytilus galloprovincialis.*

THURSDAY AFTERNOON 4:00 P.M.

THEATER

ASN PRESIDENTIAL ADDRESS

DR. JAMES H. BROWN, University of New Mexico

"Homage to Joseph Grinnell, or why are there so many species?"

THURSDAY EVENING

WENTWORTH 9

Contributed papers 19: BEHAVIOR AND EVOLUTION

CHAIR: BLAINE COLE

- 7:00 KUNIN, WILLIAM--University of Washington. *Specialization, generalization and floral constancy in a simple model of pollinator foraging behavior.*
- 7:15 BOARMAN, WILLIAM--United States Bureau of Land Management. *The role of sound degradation in the evolution of animal communication signals.*
- 7:30 COLE, BLAINE--University of Houston. *Is animal behavior chaotic? The activity of ants and flies.*
- 7:45 GROSBERG, RICHARD--University of California at Davis. *The evolution of conditional aggression in cnidarians.*
- 8:00 AYRE, DAVID; RICHARD GROSBERG--University of California at Davis. *Interclonal variation in conspecific aggressive behaviour and tolerance in sea anemones.*
- 8:15 QUELLER, DAVID--Rice University. *The maintenance of high genetic relatedness in multi-queen colonies of social wasps.*
- 8:30 STRASSMANN, JOAN--Rice University. *Cycles of queen number and genetic relatedness in neotropical wasps.*
- 8:45 RANKIN, SUSAN; L.M. DOREMUS; J.O. PALMER--Allegheny College. *Maternal care in the earwig, *Doru taeniatum*: costs and benefits.*

THURSDAY EVENING

Campus Center 301

Contributed papers 20: QUANTITATIVE AND ECOLOGICAL GENETICS

CHAIR: PHILIP SERVICE

- 7:00 DUDLEY, SUSAN--University of Chicago. *Selection on plant physiological traits in wet and dry environments.*
- 7:15 MONTALVO, ARLEE--University of California at Riverside. *The quantitative genetics of life-history traits in *Aquilegia caerulea* (Ranunculaceae).*
- 7:30 SCHWARTZ, JAMES--University of Vermont. *Assessing the effects of multiple paternity on offspring variability: an empirical study.*
- 7:45 HOULE, DAVID--University of Chicago. *Variance and covariance of life history traits due to new mutations.*
- 8:00 HENDERSON, GARY--University of Oregon. *Magnitude and patterns of genetic variation for life history traits in *Daphnia pulex*.*
- 8:15 SERVICE, PHILIP--Northern Arizona University. *Short-term laboratory evolution of correlations among life history traits in *D. melanogaster*.*
- 8:30 GROETERS, FRANCIS--University of Hawaii. *Fitness tradeoffs in the evolution of resistance to the novel biocide (*Bacillus thuringiensis*) by the diamondback moth, *Plutella xylostella*.*
- 8:45 MALLET, JAMES--Mississippi State University. *Insecticide resistance and sibling species of *Anopheles* mosquitoes in Mississippi.*

THURSDAY EVENING

Campus Center 306/307

Contributed papers 21: SEX RATIOS AND EVOLUTION OF SEX

CHAIR: FRED JANZEN

- 7:00 BASOLO, ALEXANDRA--University of California at Santa Barbara. *Fisherian sex ratio evolution: theoretical and empirical investigations.*
- 7:15 SKINNER, SAMUEL--Indiana University. *Genetic analysis of the paternal-sex-ratio (psr) chromosome in the wasp Nasonia vitripennis.*
- 7:30 JANZEN, FRED--University of Chicago. *Heritable variation in sex ratio under environmental sex determination in the common snapping turtle.*
- 7:45 HEWS, DIANA--Arizona State University; WILLIAM WAGNER, Jr.--University of Texas. *An extension of the Emlen and Oring mating systems hypothesis: a simulation model.*
- 8:00 SMITH, MICHAEL H.--Savannah River Ecology Laboratory. *Sex-biased effects of density on growth of white-tailed deer.*
- 8:15 CAMPBELL, R.B.--University of Northern Iowa. *Avoidance of inbreeding based on male ancestry.*
- 8:30 JENKINS, CHERYL--University of Texas. *Conditions for the maintenance of a haploid/diploid life cycle.*
- 8:45 LIVELY, CURT--Indiana University. *Brooding and the evolution of parthenogenesis.*

THURSDAY EVENING

Theater

Contributed papers 22: PLANT POPULATION STRUCTURE

CHAIR: MARY JO GODT

- 7:00 STEVENS, LORI--University of Vermont. *Group selection in natural populations of Impatiens capensis.*
- 7:15 CAMPBELL, DIANE--University of California at Irvine. *Distances of gene flow and the spatial scale of genetic differentiation in hummingbird-pollinated Ipomopsis aggregata.*
- 7:30 GODT, MARY JO; J.L. HAMRICK--University of Georgia. *Patterns and levels of gene flow in Lathyrus latifolius L.*
- 7:45 HOLTSFORD, TIM--University of Missouri; STEVE TONSOR--Michigan State University. *Spatial genetic structure of mating patterns in self-incompatible Plantago lanceolata.*
- 8:00 MASON, ROBERTA; KENT HOLSINGER; ROBERT JANSEN--University of Connecticut. *Extensive cpDNA restriction site variation within populations of Coreopsis (Asteraceae).*
- 8:15 EPPERSON, BRYAN--University of California at Riverside. *Spatial correlations in plant populations.*
- 8:30 WOLF, PAUL; DIANE CAMPBELL--University of California at Irvine. *Hierarchical analyses of allozymic and morphological variation in a hummingbird-pollinated plant.*
- 8:45 KRESS, W. JOHN--Smithsonian Institution. *Genetic variation in hummingbird-pollinated Heliconia, a tropical understory herb.*

THURSDAY EVENING

Wentworth 1

Contributed papers 23: MOLECULAR PHYLOGENETICS

CHAIR: BRIAN FARRELL

- 7:00 DERR, JAMES; SCOTT DAVIS; JAMES WOOLLEY; ROBERT WHARTON--Texas A&M University. *Hymenoptera phylogeny based on sequence divergence of mitochondrial DNA.*
- 7:15 LIU, HONG; A.T. BECKENBACH--Simon Fraser University. *Relationships among the insect orders: analysis of mitochondrial cytochrome c Oxidase II Sequences.*
- 7:30 MORAN, NANCY--University of Arizona; P. BAUMANN; M. MUNSON--University of California at Davis. *Aphid endosymbiosis: molecular and phylogenetic evidence for an ancient infection and subsequent cospeciation.*
- 7:45 GIVNISH, THOMAS--University of Wisconsin. *Molecular evolution and adaptive radiation atop Tepuis in the Bromeliad Genus Brocchinia.*
- 8:00 cancellation; break, or replacement to be announced
- 8:15 SMITH, MICHAEL; RUSSELL DOOLITTLE--University of California at San Diego. *Phylogeny and evolution of ancient eucaryotes based on glyceraldehyde-3-phosphate dehydrogenase protein sequences.*
- 8:30 WRAY, CHARLES--Yale University. *A phylogenetic reassessment of foraminifera based on 18s rDNA.*

FRIDAY MORNING I

Campus Center 301

Contributed papers 24: QUANTITATIVE AND ECOLOGICAL GENETICS

CHAIR: JAMES OTT & GEORGE RODERICK

- 8:00 LONG, TONY--University of California at Davis. *The quantitative genetics of clinal variation in the external morphology of Drosophila melanogaster.*
- 8:15 BOULDING, ELIZABETH--Simon Fraser University. *Prediction of short term response to intense natural selection on gastropod shell form by an invasion of predatory crabs.*
- 8:30 OTT, JAMES; GEORGE RODERICK; ROBERT DENNO--University of Maryland at College Park. *Ecological genetics of A. alboscuteatus (Coleoptera: Bruchidae): effects of fruit size and larval density on body size in a field population.*
- 8:45 BROWNE, ROBERT--Wake Forest University. *Ecological, physiological, and genetic divergence of sexual and asexual (diploid and polyploid) brine shrimp (Artemia).*
- 9:00 MCALPINE, SUSAN--University of Georgia. *Responses to predation in the larval green treefrog, Hyla cinerea.*
- 9:15 BELL, MICHAEL--State University of New York at Stony Brook. *Postglacial differentiation of Cook Inlet sticklebacks (Gasterosteus aculeatus): pelvic reduction.*
- 9:30 SPENCER, HAMISH; R. WILLIAM MARKS--University of Waikato. *A constructionist approach to the problem of the maintenance of polymorphism.*
- 9:45 KRAUSE, MAUREEN--State University of New York at Stony Brook. *The role of Gpi polymorphism in glycolytic flux variations and its effect on genotype-dependent viability in the bay scallop.*
- 10:00 BREAK

FRIDAY MORNING I

Campus Center 306/307

Contributed papers 25: SEXUAL SELECTION IN ANIMALS

CHAIR: JOEL TREXLER

- 8:00 WADE, MICHAEL--University of Chicago. *The ecology of sexual selection.*
 8:15 BREDEN, FELIX--University of Missouri. *Genetic correlations and sexual selection in the Trinidad guppy.*
 8:30 HOUDE, ANNE--University of California at Santa Barbara. *Effect of monogenean parasites on carotenoid colors and mate choice in guppies.*
 8:45 TREXLER, JOEL; ANDREA DINEP--University of Mississippi; JOSEPH TRAVIS--Florida State University. *Patterns of multiple paternity in the sailfin molly (Pisces, Poeciliidae).*
 9:00 ROSENQVIST, GUNILLA--University of California at Santa Barbara. *Male choice and sexual selection in sex-role reversed pipefish.*
 9:15 MARCHETTI, KAREN--University of California at Davis. *Sexual selection and the evolution of color patches in leaf warblers.*
 9:30 LEPSON, JAAN--University of Hawaii. *Female plumage variation in recently evolved Hawaiian Honeycreepers.*
 9:45 ZUK, MARLENE--University of California at Riverside. *Mate choice and male ornaments in red jungle fowl.*
 10:00 BREAK

FRIDAY MORNING I

Theater

Contributed papers 26: PLANT POPULATION STRUCTURE (Concluded);

POPULATION AND BIOLOGY OF ENDANGERED SPECIES (Begun)

CHAIR: SHYRIL O'STEEN

- 8:00 ASMUSSEN, MARJORIE; ANDREW SCHNABEL--University of Georgia. *Comparative effects of pollen and seed migration on the cyto nuclear structure of plant populations.*
 8:15 ROY, BARBARA--Rancho Santa Ana Botanic Garden. *The effects of pathogen mediated selection on Arabis (Brassicaceae).*
 8:30 RUCKELSHAUS, MARY--University of Washington. *Population genetics of the marine angiosperm, Zostera marina L.*
 8:45 MILLER, PHILIP; PHILIP HEDRICK--Penn State University. *Inbreeding depression in Drosophila: implications for conservation genetics.*
 9:00 GABRIEL, WILFRIED--Planck Institute for Limnology. *Population extinction by mutational load and demographic stochasticity.*
 9:15 PARSONS, P.A.--University of Adelaide. *Fluctuating morphological asymmetry: a monitor of environmental and genomic stress.*
 9:30 BAKER, C. SCOTT--Victoria University of Wellington. *Population structure and genetic variation in humpback whales.*
 9:45 O'STEEN, SHYRIL--University of Chicago. *Demographic and genetic population viability models of the gopher tortoise: protecting adults is key to long lived, late reproducing species.*
 10:00 BREAK

FRIDAY MORNING I

Wentworth 1

Contributed papers 27: PHYLOGENY OF CHARACTER COMPLEXES
CHAIR: H. BRADLEY SHAFFER

- 8:00 STRAUSS, RICHARD--University of Arizona. *Larval ossification sequences and phylogenetic relationships of myctophine lanternfishes.*
- 8:15 SHAFFER, H. BRADLEY--University of California at Davis. *The genetic basis of convergent evolution in amphibian metamorphosis.*
- 8:30 WAKE, MARVALEE--University of California at Berkeley. *"Regressive" evolution of special sensory organs in Caecilians (Amphibia: Gymnophiona): opportunity for morphological innovation.*
- 8:45 EMERSON, SHARON--University of Utah. *Character complexes and the evolution of voiceless frogs.*
- 9:00 SPEAKMAN, JOHN--University of Aberdeen. *The evolution of echolocation.*
- 9:15 CANNATELLA, DAVID; KIISA NISHIKAWA; JIM O'REILLY--University of Texas at Austin. *Phylogenetics, kinematics, and evolution of tongue projection systems in frogs.*
- 9:30 NISHIKAWA, KIISA--Northern Arizona University. *Biomechanical and behavioral transitions in the evolution of frog feeding.*
- 9:45 LYNCH, MICHAEL--University of Oregon. *Methods for the analysis of comparative data.*
- 10:00 BREAK

FRIDAY MORNING I

Wentworth 9

Contributed papers 28: MOLECULAR EVOLUTION
CHAIR: RONALD DEBRY

- 8:45 BROUGHTON, JR., RICHARD; THOMAS DOWLING--Arizona State University. *Sequence analysis of a duplication in the control region of minnow mtDNA.*
- 9:00 LANDWEBER, LAURA--Harvard University. *RNA editing and the evolution of mitochondrial DNA in kinetoplastid protozoa.*
- 9:15 DEBRY, RONALD--Florida State University. *Molecular evolution in the histone H3 gene family of rodents.*
- 9:30 PARISI, M.; K.F. HO; F. PIANO; M.P. KAMBYSELLIS--New York University. *DNA sequence analysis of vitellogenin genes and their flanking regions from the Hawaiian Drosophila species, D. grimshawi and D. planitibia.*
- 9:45 BECKER, BRITTA--University of California at San Diego. *Asexual geckos as a model for Class 1 major histocompatibility evolution.*
- 10:00 BUSH, ROBIN--University of California at Irvine. *Evolution of β -glucuronidase regulation in the genus Mus.*
- 10:15 BREAK
- Ken Paigen*

FRIDAY MORNING II

Campus Center 301

Contributed papers 29: QUANTITATIVE AND ECOLOGICAL GENETICS (Continued)
CHAIR: JAMES FRY

- 10:15 FOX, GORDON; ALAN HASTINGS--University of California at Davis. *Inferring selection history from multilocus data: Wright meets Hamilton.*
- 10:30 FRY, JAMES; MARK RAUSHER--Duke University. *Estimating selection on a flower color polymorphism in the tall morning glory.*
- 10:45 WILLIS, KEVIN--Savannah River Ecology Laboratory. *Fitness related variability in non-recessive genes: a tale of two lemurs.*
- 11:00 FRANK, STEVEN--University of California at Irvine. *Models of plant-pathogen coevolutionary genetics.*
- 11:15 SIMMS, ELLEN; JIMMY TRIPLETT--University of Chicago. *Ecological genetics of resistance to a fungal pathogen in the common morning glory.*
- 11:30 SORK, VICTORIA; KIRK STOWE; CRIS HOCHINGNOER--University of Missouri at St. Louis. *Local adaptation and resistance to insect herbivores in *Quercus rubra* L.*
- 11:45 FINEBLUM, WENDY--Duke University. *Selection by herbivores for resistance and tolerance in their host plants.*
-

FRIDAY MORNING II

Campus Center 306/307

Contributed papers 30: SEXUAL SELECTION IN ANIMALS
CHAIR: SCOTT PITNICK

- 10:15 MOORE, ALLEN--University of Kentucky. *The evolution of earwig forceps: function of forceps during courtship in the toothed earwig.*
- 10:30 WAGNER, JR., WILLIAM--University of Texas. *Bluffing or honest signalling of fighting ability in cricket frogs?*
- 10:45 RITCHIE, MICHAEL--University of Leicester. *Fitness consequences of assortative mating and hybridisation in a grasshopper: implications for reinforcement and sexual selection theory.*
- 11:00 WIERNASZ, DIANE--University of Houston. *Sexual selection and wing pattern differentiation in *Pieris* butterflies.*
- 11:15 PITNICK, SCOTT--Arizona State University. *Allocation of ejaculate among successive mates in the sperm-limited fly *Drosophila packia* and its relatives.*
- 11:30 ETGES, WILLIAM--University of Arkansas. *Remating effects on female fitness in cactophilic *Drosophila mojavensis*.*
- 11:45 SHUSTER, STEPHEN--Northern Arizona University; CLAY SASSAMAN--University of California at Riverside. *Alternative reproductive strategies: genetically-distinct male molting and growth schedules in a marine isopod crustacean.*

FRIDAY MORNING II
Contributed papers 31: POPULATION BIOLOGY OF ENDANGERED SPECIES
(Concluded)
CHAIR: JAMES CHEVERUD

Theater

- 10:15 CHEVERUD, JAMES; ERIC ROUTMAN; CASHELL JAQUISH; SUZETT TARDIF; N. BELFIORE; L. FORMAN--Washington University. *Genetic variation in captive cotton-top Tamarins (Saguinus oedipus): quantitative genetic variance and heterozygosity.*
- 10:30 BOARMAN, WILLIAM--United States Bureau of Land Management. *Preventing population fragmentation in a threatened species; progress report.*
- 10:45 SMITH, FRASER--University of Oxford. *What factors may influence the degree to which avian taxa are threatened?*
- 11:00 FELDMAN, ROBERT--University of Hawaii. *Molecular evolution, population genetics and conservation of native Hawaiian forest birds.*
- 11:15 LAMBERT, DAVID--University of Auckland. *A molecular analysis of parentage in New Zealand birds.*

FRIDAY MORNING II

Wentworth 1

Contributed papers 32: PHYLOGENY OF CHARACTER COMPLEXES (Concluded)
CHAIR: KRISTA LEE

- 10:15 GARLAND, TED--University of Wisconsin; CHRISTINE JANIS--Brown University. *Phylogenetic analysis of limb proportions and maximal running speed in mammals.*
- 10:30 GRAY, RUSSELL--University of Otago. *Waterfowl behaviour and phylogeny: a quantitative cladistic analysis of congruence.*
- 10:45 MCKITRICK, MARY--University of Michigan. *Phylogeny of avian parental care behavior.*
- 11:00 SILLEN-TULLBERG, BIRGITTA--University of Stockholm. *A phylogenetic analysis of the relationship between mating system and concealment of ovulation in anthropoid primates.*
- 11:15 LEE, KRISTA; JOEL CRACRAFT--University of Illinois at Chicago. *Phylogenetic relationships of ratite birds: re-evaluating the osteological evidence.*
- 11:30 ASQUITH, ADAM--University of Hawaii. *Multiple origins of the Hawaiian Metrargini (Heteroptera: Lygaeidae).*
- 11:45 ASCHE, MANFRED--Marburg University. *The Hawaiian plant-and leafhoppers (Homoptera Auchenorrhyncha): current status and perspectives for evolutionary research.*

FRIDAY MORNING II

Wentworth 9

Contributed papers 33: MOLECULAR EVOLUTION (Concluded)

CHAIR: RICHARD KLIMAN

- 10:30 NELSON, KIMBERLYN--Penn State University. *Molecular evolution of the Enterobacteriaceae: nucleotide polymorphisms of the gapA, putP and gnd genes in natural populations of Salmonella and Escherichia coli.*
- 10:45 HEY, JODY; RICHARD KLIMAN--Rutgers University. *DNA sequence variation within and between species of the Drosophila melanogaster subgroup.*
- 11:00 KING, LYNN MERTENS--Harvard University. *DNA sequence variation at the esterase-5 locus in Drosophila pseudoobscura.*
- 11:15 SCHAEFFER, STEPHEN; ELLEN MILLER--Penn State University. *Nucleotide diversity of Adh genes in Drosophila pseudoobscura infers the relative importance of selective and selectively neutral forces.*
- 11:30 MCDONALD, JOHN; MARTIN KREITMAN--Princeton University. *Adaptive protein evolution at the Adh locus in Drosophila: DNA sequence variation within and between species.*
- 11:45 BERRY, ANDREW; JIM AJIOKA; MARTIN KREITMAN--Princeton University. *Lack of polymorphism on the Drosophila 4th chromosome, selective sweeps, and the rate of adaptive evolution.*

FRIDAY AFTERNOON

THEATER

ASN SYMPOSIUM: BEHAVIORAL MECHANISMS IN EVOLUTIONARY ECOLOGY
ORGANIZER: LESLIE REAL

- 2:00 REAL, LESLIE University of North Carolina. *Introduction.*
- 2:10 WERNER, EARL Earl Werner University Michigan. *Ontogenetic constraints on behavioral expression: Implications for community structure.*
- 2:40 KETTERSON, ELLEN; VAL NOLAN Indiana University. *Hormones and life histories: An integrative approach.*
- 3:10 BREAK (Library Lanai) Coffee, Tea & Pastries
- 3:40 KREBS, JOHN Oxford University. *Information processing by individuals: consequences for groups and populations*
- 4:00 ARNOLD, STEVEN University of Chicago. *Genetic constraints on behavioral evolution.*
- 4:30 REAL, LESLIE University of North Carolina. *Animal behavior and the evolution of cognitive architecture.*

SSB SYMPOSIUM: PHYLOGENETIC PERSPECTIVES ON
MACROEVOLUTIONARY HYPOTHESES

ORGANIZER: MICHAEL DONOGHUE

- 2:00 DONOGHUE, MICHAEL University Arizona. *Introduction.*
 2:05 NORELL, MARK; MICHAEL NOVACEK (Speaker) American Museum of Natural History. *Does the fossil record mirror phylogeny? A comparison of cladistic results and geotemporal data.*
 2:30 THERIOT, EDWARD. Academy of Natural Sciences. *Paleontological evidence and cladistic analysis in testing evolutionary process hypotheses, with examples from diatoms.*
 2:55 SANDERSON, MICHAEL Cornell University; GEETA BHARATHAN University of Arizona. *Reconstructing rates of cladogenesis.*
 3:20 BREAK (Library Lanai) Coffee, Tea & Pastries
 3:35 FARRELL, BRIAN; CHARLES MITTER University of Maryland. *Phylogenetic study of insect-plant coevolution.*
 4:00 LOSOS, JONATHAN University of California at Davis. *Evolution of community structure in West Indian Anolis lizards.*
 4:25 CRACRAFT, JOEL. University of Illinois. *A model for the assembly of continental biotas and ecosystems.*
 4:50 DONOGHUE, MICHAEL University of Arizona; WALTER JUDD University of Florida; ROGER SANDERS Fairchild Tropical Garden. *The evolution of herbaceous angiosperms: macroevolutionary implications of a phylogenetic perspective.*
 5:15 OPEN DISCUSSION

Reminder to Contributed Paper Session Chairs. Please arrive early to your session. A projectionist should already be there. Check your equipment. Your room should have: One or more projector(s); a podium light; a pointer; and a timer for you to use.

Please announce at the beginning of your session that all speakers should already have loaded their slides or should do so as soon as possible. The projectionist will have some carousels available.

You then need to ANNOUNCE the rules, which are as follows: 1. Speakers have a total of 15 minutes, including questions.

2. The Chair will warn speakers at 12 minutes by a hand signal, and will further warn them by STANDING UP at 14 minutes. The speaker will be politely but firmly cut off at 15 minutes. No questions should be taken if the 15 minutes are gone.

You may enforce these rules by any device you think appropriate.

Do not get ahead of schedule if there is a cancellation; wait until the scheduled time to begin the next talk.

AUTHOR INDEX

ABRAMS, PETER	15	BROWN, JAMES H.	24
ADKINS, RONALD	20	BROWN, WESLEY	23
AJIOKA, JIM	31	BROWN, WILLIAM	7
ALLARD, MARC	20	BROWNE, ROBERT	26
ALLIBONE, Richard	9	BUBB, ANN	13
ANDERSON, JOHN	8	BULL, JAMES	17
ANTONOVICS, JANIS	13	BUROKER, NORMAN	9
APFELBAUM, LILIANA	10	BURTON, RONALD	22
ARCHIE, JAMES	17	BUSH, ROBIN	28
AREVALO, ELISABETH	23	BUTLIN, ROGER	23
ARNOLD, STEVEN	31	CAMACHO, JUAN P. MARTINEZ	8
ARNOLD, WILLIAM	17	CAMPANELLA, DONALD	16
ASCHE, MANFRED	5, 30	CAMPBELL, DIANE	25
ASHMAN, TIA-LYNN	19	CAMPBELL, R.B.	25
ASMUSSEN, MARJORIE	27	CANN, REBECCA	11
ASPI, JOUNI	8	CANNATELLA, DAVID	28
ASQUITH, ADAM	30	CARR, GERALD	13
AVISE, JOHN	22	CARRI, GERALD	6
AYRE, DAVID	24	CARROLL, SCOTT	21
BAKER, C. SCOTT	27	CARSON, HAMPTON	5
BAKER, HERBERT	16	CASE, TED	10
BAKER, JOHN	18	CHABORA, PETER	21
BAKER, ROBERT J.	11	CHEVERUD, JAMES	30
BALDWIN, BRUCE	6, 13	CHIBA, HIDEYUKI	9
BARTIDO, SHIRLEY	15	CHIPPINDALE, ADAM	18
BASOLO, ALEXANDRA	12, 25	CHIPPINDALE, PAUL	22
BAUMANN, P.	26	CHLAN, CARYL	19
BECKENBACH, A.T.	26	COFFROTH, MARY-ALICE	16
BECKER, BRITTA	28	COHAN, FREDERICK	23
BELFIORE, N.	30	COHEN, SARAH	18
BELL, MICHAEL	26	COLE, BLAINE	24
BENEDIX, JR., J.H.	20	COLLINS, JAMES	18
BERGER, LAUREL	7	COLLINS, TIMOTHY	23
BERMINGHAM, ELDREDGE	10, 13, 23	CONANT, SHEILA	11
BERRY, ANDREW	31	COSTICH, DENISE	22
BERT, THERESA	17	COTE, J.R.	21
BHARATHAN, GEETA	32	CRACRAFT, JOEL	20, 30, 32
BISHOP, JOHN	16	CRADDOCK, ELYSSE M.	12
BOARMAN, WILLIAM	24, 30	CREASE, TERESA	22
BOGDANOWICZ, STEVEN	17	CROOM, HENRIETTA	10
BOORE, JEFFREY	23	CRUZ-LOPEZ, HECTOR	17
BOULDING, ELIZABETH	26	CUNNINGHAM, CLIFF	18
BOWEN, BRIAN	22	DAVIS, SCOTT	23, 26
BOWERS, DEANE	21	DEBRY, RONALD	28
BRAUN, MICHAEL	20	DELLAS, T.	10
BREDEN, FELIX	27	DELPH, LYNDA	19
BRIDGE, DIANE	23	DENNO, ROBERT	26
BROOKES, MARTIN	16	DERR, JAMES	26
BROOKS, LISA	8	DESALLE, ROB	12
BROUGHTON, JR., RICHARD	28	DIETER MUELLER DOMBOIS	6
BROWN, JAMES	15		

DINEP, ANDREA 27
 DOLE, JEFFEREY (CANCEL)
 DOLT, CLAUDINE 21
 DONOGHUE, MICHAEL 32
 DOOLITTLE, RUSSELL 26
 DOREMUS, L.M. 24
 DOUGHTY, PAUL 18
 DOWLING, THOMAS 28
 DUDLEY, SUSAN 24
 DUVAL II, FERN 6
 DVORAK, JAN 13
 DYBDAHL, MARK 16
 EDMANDS, SUZANNE 7
 EHLINGER, TIMOTHY 18
 ELLSWORTH, DARRELL 20
 EMERSON, SHARON 28
 EPPERSON, BRYAN 25
 ETGES, WILLIAM 29
 FAIRBAIRN, DAPHNE 18
 FAITH, DANIEL 9
 FARRELL, BRIAN 32
 FELDMAN, ROBERT 30
 FERGUSON, DIANE 5
 FIELDING, EILEEN 8
 FINEBLUM, WENDY 29
 FLEISCHER, ROBERT 6, 11, 19
 FORMAN, L. 30
 FOSTER, SUSAN 20
 FOX, GORDON 29
 FOX, LAWTON 9
 FRANK, STEVEN 29
 FREED, LEONARD 11
 FRY, JAMES 8, 29
 FUKUDA, ICHIRO 13
 FUKUI, H. HENRY 15
 FUNK, VICKI 23
 GABRIEL, WILFRIED 27
 GALLOWAY, LAURA 16
 GANDERS, FRED 6
 GARLAND, TED 30
 GARTHWAITE, RONALD 13
 GAUGER, VANESSA 15
 GERBER, ANNE 6
 GERBER, GLENN 8
 GIBBS, H. LISLE 12
 GILLESPIE, ROSEMARY 5, 10
 GIVNISH, THOMAS 26
 GIVNISH, TOM 6
 GODDARD, KATHRYN 11
 GODT, MARY JO 25
 GOLLMAN, GUNTER 17
 GOMULKIEWICZ, RICHARD 21
 GOODNIGHT, CHARLES 17
 GOWATY, PATRICIA 8

GRAY, RUSSELL 30
 GROETERS, FRANCIS 24
 GROSBURG, RICHARD 24
 GROSHOLZ, EDWIN 15
 HADFIELD, MICHAEL 5
 HAMILTON, DAVID 16
 HAMILTON, MEREDITH 10
 HAMRICK, J.L. 6, 25
 HARRIS, REID 7
 HARRISON, RICHARD 17
 HASTINGS, ALAN 29
 HE, MEI 11
 HEDRICK, PHILIP 27
 HELENURM, KAIUS 6
 HELLBERG, MICHAEL 19
 HELM-BYCHOWSKI, KATHLEEN 20
 HENDERSON, DOUGLASS 9
 HENDERSON, GARY 24
 HENDY, MICHAEL 17
 HERBST, DERRAL 5
 HERRE, E.A. 6, 10, 21
 HESKE, EDWARD 15
 HESSLEMAN, DON 17
 HEWS, DIANA 25
 HEY, JODY 31
 HILLIS, DAVID 17, 22
 HO, K.F. 28
 HOCH, HANNELORE 5
 HOCHINGNOER, CRIS 29
 HOFFMANN, RICHARD 23
 HOFMAN, ANNELIES 16
 HOIKALA, ANNA 12
 HOIKKALA, ANNELI 8
 HOLBROOK, N. MICHELE 18
 HOLSINGER, KENT 22, 25
 HOLTSFORD, TIM 25
 HONEYCUTT, RODNEY 20
 HONG, GUANG 10
 HOUCK, MARILYN 21
 HOUDE, ANNE 27
 HOULE, DAVID 24
 HOURIGAN, THOMAS 5
 HOWARTH, FRANCIS 5
 HSIAO, TING 7
 HUDSON REEVE 8
 HUELSENBECK, JOHN 17
 HUEY, RAY 18
 HUGHES, KIMBERLEY 7
 HUGHES, KIMBERLY 7
 HUNT, ALISON 19
 HUNT, JOHN 10-12
 HURTADO, JOSEFA CABRERO 8
 INGOLFSSON, AGNAR 15
 ITO, MOTOMI 13

JACKMAN, TODD 17, 23
 JANECEK, LAURA 20
 JANIS, CHRISTINE 30
 JANSEN, ROBERT 25
 JANZEN, FRED 25
 JAQUISH, CASHELL 30
 JARECKI, LIANNA 18
 JARRELL, PAUL 23
 JENKINS, CHERYL 25
 JOHNSON, MICHAEL 15
 JOKIEL, PAUL 5
 JONES, ROSS 7
 JOSWIAK, GERARD 10
 JUDD, WALTER 32
 KAMBYSELLIS, M.P. 15, 28
 KAMBYSELLIS, MICHAEL 12
 KAMPING, ALBERT 8
 KANESHIRO, KENNETH 12
 KARL, STEPHEN 22
 KAROLY, KEITH 19
 KARRON, JEFFREY 22
 KASS, DAVID 11
 KAWATA, MASAKADO 9
 KESSING, BAILEY 11
 KETTERSON, ELLEN 31
 KIBOTA, TRAVIS 8
 KIDO, MICHAEL 15
 KIM, JUNHYONG 9
 KING, LYNN MERTENS 31
 KIRKPATRICK, MARK 21
 KLASSEN, STEVEN 21
 KLIMAN, RICHARD 31
 KOEPFER, H. ROBERTA 23
 KOHANE, MICHAEL 21
 KORDOS, LISA 9
 KORMAN, AMY 16
 KRAUSE, MAUREEN 26
 KREBS, JOHN 31
 KREITMAN, MARTIN 31
 KRESS, W. JOHN 25
 KUNIN, WILLIAM 24
 KYHOS, DONALD 6, 13
 LACEY, ELIZABETH 21
 LAFFERTY, KEVIN 21
 LAMBERT, DAVID 30
 LANDWEBER, LAURA 28
 LARSEN, ERIC 9
 LASSIOS, HARIS 23
 LEE, KRISTA 30
 LEE, RHONDA 10
 LEPSON, JAAN 27
 LESSA, ENRIQUE 22
 LESSIOS, HARILAOS 13
 LEVERICH, W.J. 8

LICHT, PAUL 18
 LIIMATAINEN, JAANA 8
 LITTLEJOHN, MURRAY 17
 LIU, HONG 26
 LIVELY, CURT 25
 LLOYD, DAVID 16
 LOCKWOOD, SAMUEL 16
 LONG, TONY 26
 LOSOS, JONATHAN 32
 LOVELESS, LYN 16
 LUM, J. KOJI 22
 LUND, CHRISTOPHER 16
 LUTTINGER, NINA 18
 LYNCH, MICHAEL 28
 MACKENZIE, AULAY 7, 23
 MAGRATH, M.J.L. 8
 MALLET, JAMES 24
 MARCHETTI, KAREN 27
 MARELLI, DAN 17
 MARGARITIS L. 10
 MARK COURTNEY 12
 MARKS, R. WILLIAM 26
 MARSHALL, DIANE 22
 MARTIN, ANDREW 23
 MARTINEZ, DANIEL 7
 MASON, ROBERTA 25
 MAYER, STEPHANIE 5
 MAZER, SUSAN 19
 MCALPINE, SUSAN 26
 MCCAFFERTY, SHAWN 13
 MCCALL, CLAIRE 22
 MCCARTHY, KEVIN 17
 MCDONALD, JOHN 31
 MCKITRICK, MARY 30
 MCKONE, MARK 16
 MCMILLAN, W. OWEN 9
 MEAGHER, THOMAS 19, 22
 METZ, EDWARD 9
 MEYER, AXEL 23
 MILLER, ELLEN 31
 MILLER, PHILIP 27
 MILLER, STEPHEN 5
 MITTER, CHARLES 32
 MIYAMOTO, MICHAEL 20
 MOLE, SIMON 7
 MOLINEUX, IAN 17
 MONTALVO, ARLEE 24
 MOORE, ALLEN 29
 MOORE, WILLIAM 17
 MORAN, NANCY 26
 MORITZ, CRAIG 17
 MOUSSEAU, TIMOTHY 7
 MULDER, RAOUL 8
 MUNSON, M 26

NEAL, PAUL 7
 NEIGEL, JOSEPH 19
 NELSON, KIMBERLYN 31
 NILES, JENNIFER 21
 NISHIKAWA, KIISA 28
 NOLAN, VAL 31
 NORELL, MARK 32
 NOVACEK, MICHAEL 32
 NOVAK, JAMES 18
 NUNNEY, LEN 16
 O'CONNELL, CAITLIN 9
 O'KANE, STEVE 6
 O'REILLY, JIM 28
 O'STEEN, SHYRIL 27
 OLIVER, DAVID 10
 OLSSON, KATHERINE 10
 ONO, MIKIO 13
 ORIVE, MARIA 16
 ORR, H. ALLEN 20
 ORR, MATTHEW 9
 OTT, JAMES 26
 OTTE, DANIEL 5
 PALMER, J.O. 24
 PALMER, JAMES 21
 PALUMBI, STEPHEN 9, 10, 13
 PARISI, M. 28
 PARKER JR., E.D. 9
 PARSONS, P.A. 27
 PATTON, JAMES 10
 PEARSON, HOLLY 16
 PECK, ROBERT 6
 PENDLETON, BURTON 7
 PENDLETON, ROSEMARY 7
 PENNY, DAVID 17
 PFENNIG, DAVID 8, 18
 PIANO, F. 28
 PITNICK, SCOTT 29
 PODOLSKY, ROBERT 18
 POLAK, MICHAL 8
 POTTS, DONALD 13
 POWELL, ELIZABETH 6
 PRICE, DONALD 8
 PTACEK, MARGARET 20
 QUELLER, DAVID 24
 RANKER, TOM 6
 RANKIN, M.A. 21
 RANKIN, SUSAN 24
 RAUSHER, MARK 29
 READ, ANDREW 12
 REAL, LESLIE 31
 REED, KENT 17
 REEVE, HUDSON 8
 REMBER, WILLIAM 10
 REZNICK, DAVID 18

RHYMER, JUDITH 20
 RICH, PAUL 18
 RICHTER, KEVIN 7
 RIDDLE, BRETT 22
 RIGGS, LAWRENCE (CANCEL)
 RIGNEY, LISA 7
 RITCHIE, MICHAEL 29
 ROBERTS, MICHAEL 22
 ROBINSON, KATHRYN 15
 RODD, HELEN 7
 RODERICK, GEORGE 26
 RODRIGO, ALLEN 17
 ROFF, DEREK 18
 ROGERS, ALAN 15
 ROPER, CAROLINE 15
 ROSEL, PATRICIA 10
 ROSENQVIST, GUNILLA 27
 ROTENBERRY, JOHN 15
 ROUTMAN, ERIC 30
 ROWE, ERIC 19
 ROWE, LOCKE 8
 ROY, BARBARA 27
 RUCKELSHAUS, MARY 27
 RUSSELL, MICHAEL 15
 SAKAI, ANN 5
 SANDERS, ROGER 32
 SANDERSON, MICHAEL 32
 SANDOVAL, CRISTINA 21
 SASSAMAN, CLAY 29
 SAVALLI, UDO 20
 SAWAMURA, KYOICHI 9
 SCHAEFFER, CATHERINE (POSTER)
 SCHAEFFER, STEPHEN 31
 SCHIBECI, SUE 17
 SCHICK, CHARLES 19
 SCHLUTER, DOLPH 20
 SCHMID, BERNHARD 8, 21
 SCHMID, JEFFREY 9
 SCHMITT, JOHANNA 21
 SCHNABEL, ANDREW 27
 SCHNEIDER, CHRISTOPHER 17
 SCHULMAN, MYRA 13
 SCHWARTZ, JAMES 24
 SEGER, JON 6
 SERVICE, PHILIP 24
 SHAFFER, H. BRADLEY 28
 SHAW, JONATHAN 16
 SHAW, KERRY 10
 SHIPP, ROBERT 9
 SHUSTER, STEPHEN 29
 SILLEN-TULLBERG, BIRGITTA 30
 SIMMS, ELLEN 29
 SIMON, CHRIS 5
 SINERVO, BARRY 18

SITES, JACK 23
 SKINNER, SAMUEL 25
 SLATKIN, MONTGOMERY 19
 SMITH, FRASER 30
 SMITH, MICHAEL 23, 26
 SMITH, MICHAEL H. 25
 SMITH, THOMAS 11
 SNYDER, JIM 6
 SOKOLOWSKI, MARLA 7
 SORK, VICTORIA 29
 SPEAKMAN, JOHN 28
 SPENCER, HAMISH 26
 SPITZE, KEN 12
 SRYGLEY, ROBERT 21
 STEARNS, STEVEN 15
 STEMMERMAN, LANI 5, 6
 STEVENS, LORI 25
 STONE, FRED 10
 STONE, J.L. 6
 STOWE, KIRK 29
 STRASSMANN, JOAN 24
 STRATTON, DON 8
 STRAUSS, RICHARD 28
 SULLENDER, BARRY 11
 SUN, MEI 22
 TAPER, MARK 10, 15
 TARDIF, SUZETT 30
 TARR, CHERYL 6, 11, 19
 TAUBER, CATHERINE 7
 TAUBER, MAURICE 7
 THERIOT, EDWARD 32
 THOMAS, RICHARD 10
 THOMPSON, DANIEL 18
 THOMSON, JAMES 6
 TOMPKINS, LAURIE 23
 TONSOR, STEVE 25
 TRAVIS, JOSEPH 27
 TREXLER, JOEL 27
 TRIPLETT, JIMMY 29
 TURNER, PAUL E. 8
 UNABIA, CATHERINE (CANCEL)
 UYENOYAMA, MARCY 19
 VAN DEN BUSSCHE, RONALD 10
 VERMEIJ, GEERAT 13
 VIA, SARA 21
 VIRDEE, SONIA 9, 17
 WADDEL, PETER 17
 WADE, MICHAEL 27
 WAGNER, JR., WILLIAM 29
 WAGNER, WARREN 5, 13, 23
 WAGNER, WARREN H. JR. 13
 WAGNER, WARREN Jr. 25
 WAKE, DAVID 17
 WAKE, MARVALEE 28

WAKELEY, JOHN 18
 WALLER, DON 22
 WALLIS, GRAHAM 9
 WANG, DEGUI 11
 WARHEIT, KENNETH 17
 WATANABE, TAKEO 9
 WEINBERG, JAMES 20
 WEINER, JACOB 8
 WELLER, STEPHEN 5
 WELLS, MARTA 23
 WELLS, R. SPENCER 11
 WERNER, EARL 31
 WHARTON, ROBERT 26
 WICHMAN, HOLLY 9, 10
 WIENER, PAM 16
 WIERNASZ, DIANE 29
 WILLIAMS, ANNIE 10
 WILLIS, KEVIN 29
 WISOTZKEY, ROBERT 11
 WOLF, PAUL 25
 WOLFE, LORNE 7
 WOODRUFF, R.C. 15
 WOOLLEY, JAMES 26
 WRAY, CHARLES 26
 WULFF, RENATA 21
 WYNGAARD, GRACE 22
 ZERA, ANTHONY 7
 ZOUROS, ELEFTHERIOS 23
 ZUK, MARLENE 27